#### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

			_
FΩ	RI	л:	3

AMENDED REPORT (highlight changes)

	-	APPLICAT	ION FOR	PERM	IT TO	DRILL	5. MINERAL ML-4	. LEASE NO: 7065	6. SURFACE: State
1A. TYPE OF WO	rk: D	RILL 🔽	REENTER [	DE	EPEN [		7. IF INDIAI	N, ALLOTTEE OR T	RIBE NAME:
B. TYPE OF WEL	.L: OIL 🗌	GAS 🗹	OTHER		SING	GLE ZONE MULTIPLE ZONE	8. UNIT or 0	CA AGREEMENT N	AME:
2. NAME OF OPE	RATOR:		<del></del>				9. WELL NA	ME and NUMBER:	
Enduring R		LC							10-25-11-32
3. ADDRESS OF 0 475 17th St	., Ste 1500	CITY Denve	er <sub>STA</sub>	TE CO	ZIP 802		Unide:	and pool, or will	Jild Oot
4. LOCATION OF AT SURFACE:	1974' FNL	<sup>ES)</sup> 669683 - 505' FWL	× 44/892 SW-NW 32	28 Y 3 2-10S-29	9, 90°	7 241 - 109. 13 1928	11. QTR/QT MERIDI/	r, section, towan:  7 32 10S	
AT PROPOSED	PRODUCING ZO	NE: 666' F 59724 <b>X</b> 4	NL - 659' FW	/L NW-1 ( 39.9	NW 32	-10S-25E 5 - 109.   3   <b>3 5</b> 0			
14. DISTANCE IN	MILES AND DIRE	CTION FROM NEA	REST TOWN OR PO	ST OFFICE:			12. COUNT	Υ;	13. STATE: UTAH
12 South	west of Bor	nanza, UT					Uintah	l	J JAN
15. DISTANCE TO	NEAREST PROP	PERTY OR LEASE L	INE (FEET)	16. NI	JMBER OF	ACRES IN LEASE:	17. NUMBER OF A	CRES ASSIGNED	TO THIS WELL:
505' (SHL)	) - 659'(BHI	L)		ŀ		640			40 acres
18. DISTANCE TO	NEAREST WELL	. (DRILLING, COMP	LETED, OR	19. PF	ROPOSED	DEPTH:	20. BOND DESCR	IPTION:	
APPLIED FOR 1000' +	R) ON THIS LEASE	E (FEET)				5,245	RLB00080	131	
	(SHOW WHETHE	R DF, RT, GR, ETC	1.	22 AF	PROXIMA	TE DATE WORK WILL START:	23. ESTIMATED D		
5764'	RT-KB	,,,	•••		1/2006		20 days		
24.			PROPOS	SED CAS	ING A	ND CEMENTING PROGRAM			
SIZE OF HOLE	CASING SIZE,	GRADE, AND WEI	SHT PER FOOT	SETTING I	DEPTH	CEMENT TYPE, QUA	ANTITY, YIELD, AND	SLURRY WEIGHT	
20"	14"	line pipe			40	3 yards	Ready Mix		
11"	8-5/8"	J-55	24#		2,000	Premium Lead	138 sxs	3.50	11.1
						Premium Tail	138 sxs	1.15	15.8
7-7/8"	4-1/2"	N-80	11.6#		5,245	Class G	24 sxs	3.3	11.0
	 					50/50 Poz Class G	598 sxs	1.56	14.3
25.	<u> </u>				ATTA	CHMENTS			
	LOWING ARE AT	TACHED IN ACCOR	RDANCE WITH THE	UTAH OIL AI		ONSERVATION GENERAL RULES:		<u></u>	
<b>✓</b> WELL PL	47 OD MAD DD51	PARED BY LICENSE	ED CLIENTEVOD OD	CNOINEED		COMPLETE DRILLING PLAN			
	AT OR WAP PREI	PARED BT LICENSI	D SURVETOR OR	ENGINEER		COMPLETE DIVILLING PLAN			
■ EVIDENO	CE OF DIVISION O	OF WATER RIGHTS	APPROVAL FOR US	SE OF WATE	R	FORM 5, IF OPERATOR IS PE	RSON OR COMPAN	Y OTHER THAN TI	1E LEASE OWNER
NAME (F) FACE	Alvin	R. (Al) Arliar	l			<sub>тітье</sub> Landman - Re	gulatory Spe	cialist	
		Peliar			·	7/12/2006			
SIGNATURE		- A	<i>b</i>			DATE 1/12/2000			
(This space for Sta		3-047-38	13G5	<del></del>	 	Approved by the Utah Division of Oil, Gas and Minis	e i ng		EIVED 2 0 2006

(See Instructions of the Section — 21 — 04)

DIV. OF OIL, GAS & MINING

#### T10S, R25E, S.L.B.&M. N89'57'W - 39.92 (G.L.O.)1975 Brass Cap 2635.71' (Measured) N89'58'W - 39.96 (G.L.O.) N89°57'W G.L.O. (Basis of Bearings) S89°59'58"W - 2635.85' (Meas.) 1975 Brass Cap Brass Cap (G.L.O.) 659' 2667.05 40 Drilling 6. Window N00.04'E N00"06'E 505 1975 Brass Cap Brass Cap - *2639.13' (Meas.* 39.98 (G.L.O.) WELL LOCATION: SOUTHAM CANYON 10-25-11-32 ELEV. UNGRADED GROUND = 5758.2' N00'16'E N00'15'28"E *NOO'02'17"* NORTH 1975 1975 Brass Cap Brass Cap Brass Cap N89°55'53"E - 2636.63' (Meas.) S89'59'18"E - 2649.30' (Meas.) S89°57'E - 40.13 (G.L.O.) N89°59'E - 39.97 (G.L.O.) SOUTHAM CANYON 10-25-11-32 = SECTION CORNERS LOCATED (Surface Location) NAD 83 LATITUDE = 39°54′26.31"BASIS OF ELEV; U.S.G.S. 7-1/2 min LONGITUDE = 109° 07' 57.16'

QUAD (SOUTHAM CANYON)

## ENDURING RESOURCES

WELL LOCATION, TOP OF HOLE FOR THE SOUTHAM CANYON 10-25-11-32, THE TOP OF HOLE LOCATED AS SHOWN IN THE SW 1/4 NW 1/4, THE BOTTOM HOLE LOCATED AS SHOWN IN THE NW 1/4 NW 1/4 OF SECTION 32, T10S, R25E, S.L.B.&M. UINTAH COUNTY, UTAH.



#### NOTES:

1. The Bottom of hole bears N06°48'24"E 1316.80' from the Top of Hole.

THIS IS TO CERTIFY THAT THE ABOVE PERT WAS PREPARED FROM FIELD MOTES OF ACTUME SURVEYS MADE BY ME OR UNDER AND SUPPRESSION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND FELIEF.No.189377



#### TRI STATE LAND SURVEYING & CONSULTING

180 NORTH VERNAL AVE. - VERNAL, UTAH 84078 (435) 781-2501

DATE DRAWN: 10-28-05	SURVEYED BY: J.H.	SHEET
REVISED:	DRAWN BY: F.T.M.	2b
NOTES:	SCALE: 1" = 1000'	OF 10

#### ENDURING RESOURCES. LLC

425 Seventeenth Street, Suite 1500 Denver, Colorado 80202

Telephone:

303-573-1222

Facsimile:

303-573-0461

July 12, 2006

State of Utah Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, Utah 84114-5801 Attention: Ms. Diana Whitney

RE: **Exception Locations – Directional Drilled Well** 

> Southam Canyon 10-25-11-32 1974' FNL - 505' FWL SW-NW 32-10S-25E (Surface Location) 666' FNL - 659' FWL NW-NW 32-10S-25E (BHL) State Lease: ML-47065 Uintah County, Utah

Dear Ms. Whitney:

Enduring Resources, LLC respectfully requests a spacing exception for the following wells. Surface locations will be 25', more or less apart. BHL's for each well will be in its own "assigned" 40-acre, drilling window. No BHL's will be within 960' of each other. All of the wells, on this pad are being drilled directional to limit surface impact and to avoid drilling on steep slopes.

Enduring Resources, LLC is the only lease owner within a 460' radius of any point of any of the well bores, the surface locations, and the BHL's, to be drilled from this pad.

Therefore, Enduring Resources, LLC hereby grants itself permission to directionally drill the wells and the exception well locations.

Very truly yours

**ENDURING RESOURCES. LLC** 

al arlian

Alvin R. (Al) Arlian

Landman - Regulatory Specialist

ara/

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Uintah County, Utah

Dear Ms. Whitney:

Enduring Resources, LLC respectfully requests a spacing exception for the following wells. Surface locations will be 25', more or less apart. BHL's for each well will be in its own "assigned" 40-acre, drilling window. No BHL's will be within 960' of each other. All of the wells, on this pad are being drilled directional to limit surface impact and to avoid drilling on steep slopes.

Enduring Resources, LLC is the only lease owner within a 460' radius of any point of any of the well bores, the surface locations, and the BHL's, to be drilled from this pad.

Therefore, Enduring Resources, LLC hereby grants itself permission to directionally drill the wells and the exception well locations.

Very truly yours

**ENDURING RESOURCES, LLC** 

al alean &B

Alvin R. (Al) Arlian

Landman - Regulatory Specialist

ara/

# **Enduring Resources, LLC Southam Canvon 10-25-11-32** NW-NW 32-10S-25E **Uintah County. Utah**

State Lease: ML-47065

#### **ONSHORE ORDER 1 - DRILLING PLAN**

#### 1. **Estimated Tops of Geological Markers:**

Formation	Depth (K.B.)
Uinta	Surface
Green River	179
Wasatch	2369
Mesaverde	3454

#### 2. **Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals:**

Substance	Formation	Depth (K.B.)
	KB-Uinta Elevation: 5764'	
Oil / Gas	Green River	179
Oil /Gas	Wasatch	2369
Oil /Gas	Mesaverde	3454
	Estimated TD	5245

A 11" hole will be drilled to approximately 2000 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set.

#### 3. Pressure Control Equipment: (3000 psi schematic attached)

- Α. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer on 3,000 psi casinghead, with 3,000 psi choke manifold equipped per the attached diagram. BOPE as specified in Onshore Oil & Gas Order Number 2. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.
- B. Pressure Rating: 3,000 psi BOPE
- C. Kelly will be equipped with upper and lower Kelly valves.
- D. Testing Procedure: Annular Preventer

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

Page

At a minimum, the above pressure test will be performed:

- 1. When the annular preventer is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

#### **Blow-Out Preventer**

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

#### E. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of Onshore Oil & Gas Order Number 2.

#### 4. **Proposed Casing & Cementing Program:**

### A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set
					(MD)
20"	14" O.D.				40' (GL)
11"	8-5/8"	24#	J-55	ST&C	0 – 2,016' (KB) est.
7-7/8"	4-1/2"	11.6#	N-80	LT&C	0 – 5245' (KB)
					- 5645

The surface casing will have guide shoe, 1 joint, insert float collar. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and the next16 joints with bowspring centralizers on every other collar (8 centralizers total). Thread lock guide shoe.



Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

#### **B.** Casing Design Parameters:

Depth (MD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40' (GL)	14" OD			
2016' (KB)	8-5/8", 24#/ft, J55, STC	1370/1.52(a)	2950/3.28(b)	244/5.81(c)
5245' (KB)	4-1/2", 11.6#/ft, N-80, LTC	6350/2.33 (d)	7780/3.10 (e)	223/4.26(f)

- (a.) based on full evacuation of pipe with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient
- (f.) based on casing string weight in 9.2 ppg mud

#### PROPOSED CEMENTING PROGRAM

#### Surface Casing (if well will circulate)-Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	sxs	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	1516	Premium cement + 16% gel + 0.25 pps celloflake	138	25%	11.1	3.50
8-5/8"	Tail	500	Premium cement + 2% CaC <sub>2</sub> + 0.25 pps celloflake	138	25%	15.8	1.15

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft<sup>3</sup>/sx) cement will be premium cement w/ 3% CaCl<sub>2</sub>.+0.25 pps celloflake. Volume as required

## Surface Casing (if well will not circulate) - Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	sxs	EXCESS (%)	WEIGHT (ppg)	YIELD (ft³/sx)
8-5/8"	Lead	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25	15.8	1.15
8-5/8"	Top job	As req.	Premium cement + 3% CaCl <sub>2</sub> + 0.25 pps celloflake	As Req.		15.8	1.15



# Production Casing and Liner - Cemented TD to 300' above base of surface casing

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
4-1/2"	Lead	253	Class "G" + 5% NaCl + 12% Gel + 0.25 pps celloflake + 0.2% antifoam + 0.25% fluid loss + 1% extender	24	25	11.0	3.3
4-1/2"	Tail	3276	50/50 POZ Class G + 2% gel +1% CaCl <sub>2</sub> + 0.2% dispersant + 0.2% fluid loss + 0.1% antifoam	598	25	14.3	1.56

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to 300' above base of surface casing. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

#### 5. **Drilling Fluids (mud) Program:**

Interval	Mud Weight	Fluid Loss	Viscosity	Mud Type
(MD)				
0' - 2016' (KB)		No cntrl		Air/mist
2000'-3000' (KB)	8.4-8.6	No cntrl	28-36	Water
3000'-5245' (KB)	8.8-9.8	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

## 6. <u>Evaluation Program:</u>

Tests:

No tests are currently planned.

Coring:

No cores are currently planned.

Samples:

No sampling is currently planned.



#### Logging

- Dual Induction SFL /Gamma Ray/Caliper/SP/TDLT/CNL/ML TD to Base Surface Casing
- Cement Bond Log / Gamma Ray:
   TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

Stimulation: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

#### 7. <u>Abnormal Conditions:</u>

No abnormal temperatures or pressures are anticipated. No  $H_2S$  has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 2,727 psi (calculated at 0.52psi/foot of hole) and maximum anticipated surface pressure equals approximately 1,574 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

## 8. <u>Anticipated Starting Dates:</u>

Anticipated Commencement Date Within one year of APD issue.

Drilling Days Approximately 10 days

• Completion Days - Approximately 10 days

Anticipate location construction within 30 days of permit issue.

## 9. Variances:

None anticipated

#### 10. Other:

A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining and the School and Institutional Trust lands Administration upon their receipt.

Single Shot directional surveys will be dropped every 2000 feet to monitor hole angle.

Directions to the Well Pad for: Southam Canyon 10-25-12-32 Southam Canyon 10-25-11-32

Pad Location: SWNW of Sec. 32, T10S, R25E, S.L.B.&M.

Beginning at the city of Bonanza, Utah. Leave the city of Bonanza heading south on U.S. Highway 45, which becomes a paved road, for a distance of approximately 3.7 miles where the road turns left at a gaging station. Do not turn left. Continue southeasterly on the same road for a distance of 5.9 miles, where there is a fork in the road. Turn left, and proceed for a distance of approximately 1.2 miles. Turn right and bear westerly approximately 1.1 miles to the beginning of the proposed access. Thence proceed south for approximately 705 feet (0.1 miles) along the proposed access to the proposed well pad.

# **Enduring Resources, LLC**

## Southam Canyon 10-25-11-32 NW-NW 32-10S-25E (BHL) Uintah County, Utah

State Lease: ML-47065

#### **MULTI-POINT SURFACE USE & OPERATIONS PLAN**

#### 1. Existing Roads:

Directions to the Southam Canyon 10-25-12-32 (Surface Location) Well Pad

Beginning at the city of Bonanza, Utah. Leave the city of Bonanza heading south on U.S. highway 45, which becomes a paved road, for a distance of approximately 3.7 miles where the road turns left at a gaging station. Do not turn left. Continue in a southeasterly on the same road for a distance of 5.9 miles, where there is a fork in the road. Turn left, and proceed for a distance of approximately 1.1 miles to the beginning of the proposed access. Thence proceed south for approximately 705 feet (0.1 miles) along the proposed access to the proposed Southam Canyon 10-25-12-32 (surface location) well pad.

## 2. Planned Access Roads:

The proposed access road will be approximately 705 feet of new construction all onlease.

#### ALL NEW CONSTRUCTION IS ON SITLA LANDS.

The proposed access road will be utilized to transport personnel, equipment and supplies to and from the proposed well site during drilling, completion and production operations. The road will be utilized year round.

The access road will be crowned 2% to 3%, ditched and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet right-of-way. Maximum grade of road is 5% or less. Graveling or capping the roadbed will be performed as necessary to provided a well constructed, safe road. No fence crossings, culverts, turnouts, cattle guards or major cuts and fills are required. Prior to construction or upgrading, the proposed road shall be cleared of any snow and allowed to dry completely.

Surface disturbance and vehicular traffic will be limited to the proposed location and proposed access route. Any additional area needed will be approved in advance. All construction shall be in conformance with the standards outlined in the BLM and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development. 1989.

The road surface and shoulders will be kept in a safe usable condition and will be maintained in accordance with the original construction standards. All drainage ditches will be kept clear and free flowing and will be maintained according to original construction standards. The access road surface will be kept free of trash during



operations. All traffic will be confined to the approved disturbed surface. Road drainage crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the road bed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided. When snow is removed from the road during the winter months, the snow shall be pushed outside of the borrow ditches and the turnouts kept clear so that snowmelt will be channeled away from the road.

# 3. <u>Location of Existing Wells within a One-Mile radius (See "Topo" Map "C" attached):</u>

The following wells are wells located within a one (1) mile or greater radius of the proposed location.

a. None: Water Wells:

b. None: Injection Wells:

c. None: Producing Wells:

d. None: Drilling Wells:e. None: Shut-in Wells:

f. None: Temporarily Abandoned Wells:

g. None: Disposal Wells:

h. None: Abandoned Wells:

i. None: Dry Holes:

j. None: Observation Wells:

k. (10): Pending (staked) Wells:i. Enduring has ten other wells staked in this section.

# 4. <u>Location of Existing and/or Proposed Facilities:</u>

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e. production tanks, produced water tanks and/or heater treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank and be independent of the back cut.

All permanent (on site for six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth tone color to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Inter-Agency Committee

All facilities will be painted within 6 months of installation. The color shall be designated by DOG&M and SITLA. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.



Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

Gas Gathering Pipeline for this well will be:

2,440' Surface Pipeline On-Lease SITLA

If this well is capable of economic production, a 4" (or less) steel surface gas gathering line and related equipment shall be installed. The surface gas gathering line shall be in use year round. A total of approximately less than 4,680 feet of surface gas gathering pipeline shall be laid on the surface to minimize surface disturbance:

The proposed pipeline will begin at the well site; and be laid on the surface next to the new access road to tie-in to a steel surface pipeline that is located next to the county road.

The meter run will be housed. The gas gathering line will be buried or anchored down from the wellhead to the meter.

Upon plugging and abandonment, the gas gathering line will be removed and the disturbed area will be re-contoured and restored as near as practical to the original condition. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

## 5. Location and Type of Water Supply:

Water will be purchased from American Gilsonite from the following source: Water Right No. 49-222, Application/Claim No. A29909/a4958, Certificate No. 9915 ("AGC Water Right"). The AGC Water Right consists of nineteen underground water wells located in Sec.2, T10S, R24E, SLBM, piped to and stored in a cistern located in Section 25, T9S, R24E.

Water will be hauled to the location over the roads marked on "Topo" Maps "A" and "B."

No water well is to be drilled on this lease.

#### **6** Source of Construction Materials:

Surface and subsoil materials in the immediate area will be utilized for location and access road construction.

Any gravel will be obtained from a commercial source; however, gravel sized rock debris associated with location and access road construction may be used as access road surfacing material.

#### 7. Methods of Handling Waste Materials:

Drill cuttings will be contained and buried in the reserve pit.



Any gravel will be obtained from a commercial source; however, gravel sized rock debris associated with location and access road construction may be used as access road surfacing material.

## 7. <u>Methods of Handling Waste Materials:</u>

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exits or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, brake or allow discharge of liquids.

The reserve pit will be lined with ¼ felt and a minimum of 16 mm plastic with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the will be disposed of in the pit.

A chemical portable toilet will be furnished with the drilling rig. The toilet will be replaced periodically utilizing a licensed contractor to transport by truck the portable chemical toilet so that its contents can be delivered to the Vernal Wastewater Treatment Facility in accordance with state and county regulations.

Garbage, trash and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash well is burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well.

Produced oil will be stored in an oil tank and then hauled by truck to a crude purchaser facility. Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to an approved disposal site.



## 8. Ancillary Facilities:

During drilling operations, approximately 20 days, the site will be a manned camp. Three or four additional trailers will be on location to serve as the crews' housing and eating facilities. These will be located on the perimeter of the pad site within the topsoil stockpiles. Refer to Sheet 4.

#### 9. Well Site Layout: (Refer to Sheets #2, #3, and #4)

The attached Location Layout Diagrams described drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s) and surface material stockpiles(s).

Please see the attached diagram for rig orientation and access roads.

The top soil will be windrowed rather than piled. It will be reseeded and track walker at the time the location is constructed. Seeding will be with the determined during the onsite. (Refer to "Seed Mixture for Windrowed Top Soil Will included:" following herein.

The top soil removed from the pit area will be store separately and will not be reseeded until the pit is reclaimed.

All pits shall be fence to the following minimum standards:

- a. 39 inch net wire shall be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- b. The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches over the new wire. Total height of the fence shall be at least 42 inches.
- c. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- d. Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two fence posts shall be no greater than 16 feet.
- e. All wire shall be stretched by, using a stretching device, before it is attached to corner posts.
- f. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.
- g. Location size may change prior to drilling the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling, the location will be re-surveyed and a Form 9 will be submitted.



## 10. Plans for Surface Reclamation:

#### **Producing Location:**

- a. Immediately upon well completion the location and surrounding area will be cleared of all unused tubing, equipment, materials, trash and debris not required for production.
- b. Immediately upon well completion any hydrocarbons in the pit shall be removed in accordance with 40CFR 3162.7.
- c. Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.
- d. The reserve pit and that portion of the location not needed for production facilities/operations will be re-contoured to the approximated natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.
- e. To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface 3 feet above surrounding round surface to allow the reclaimed pit area to drain effectively.
- f. Upon completion of back filling, leveling and re-contouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

## **Dry Hole/Abandoned Location:**

- i. Abandoned well sites, roads and other disturbed areas will be restored as nearly as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions and re-establishment of vegetation as specified.
- ii. All disturbed surfaces will be re-contoured to the approximated natural contours with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

## Seed Mixture for Windrowed Top Soil Will Included:

To be provided by the DOG&M and/or SITLA.

## 11. Surface Ownership: Location, Access and Pipeline Route:

Wellsite:

SITLA

Access:

SITLA

Pipeline:

SITLA



#### 12. Other Information

#### On-site Inspection for Location, Access and Pipeline Route:

The on-site will be scheduled by SITLA and DOG&M.

## **Special Conditions of Approval:**

- Tanks and Production Equipment shall be painted pursuant of SITLA and DOG&M request.
- Surface Gathering Pipeline shall be 4" or less

#### Archeology:

a. A Cultural Resource Inventory Report is pending and to be prepared by Montgomery Archaeological Consultants.

#### Paleontology:

a. A Paleontology Reconnaissance Report is pending and to be prepared by Intermountain Paleo-Consulting.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the Antiquities Act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

#### 13. Lessee's or Operator's Representatives:

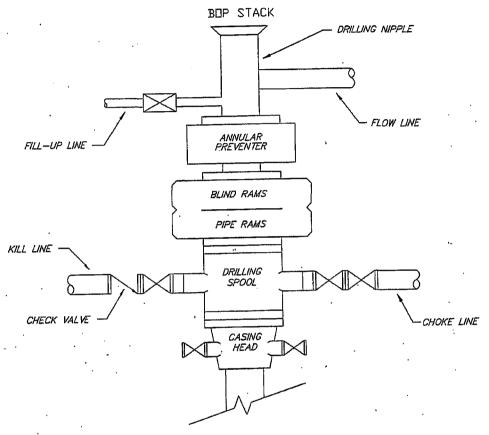
#### Representatives:

Teme Singleton Alvin R. (Al) Arlian Landman - Regulatory Specialist **Drilling Engineer** Enduring Resources, LLC Enduring Resources, LLC 475 17<sup>th</sup> Street, Suite 1500 475 17<sup>th</sup> Street, Suite 1500 Denver. Colorado 80202 Denver. Colorado 80202 Office Tel: 303-573-5711 Office Tel: 303-350-5114 303-573-0461 Fax Tel: 303-573-0461 Fax Tel:

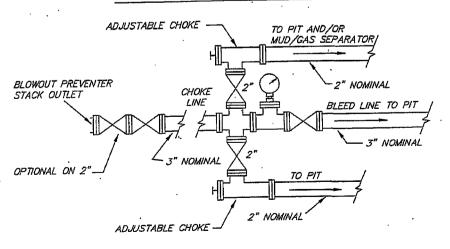
<u>aarlian@enduringresources.com</u> <u>tsingleton@enduringresources.com</u>

## **ENDURING RESOURCES, LLC**

TYPICAL 3,000 p.s.i.
BLOWOUT PREVENTER SCHEMATIC



#### TYPICAL 3,000 p.s.i. CHOKE MANIFOLD SCHEMATIC





#### **ENDURING RESOURCES** Southam Canyon 10-25-11-32 SW/NW Sec. 32, T10S, R25E Uintah County, Utah



					SECTION 1	DETAILS				
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	6.81	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	6.81	400.00	0.00	0.00	0.00	6.81	0.00	Start Nudge
3	733.33	10.00	6.81	731.64	28.81	3.44	3.00	6.81	29.02	End Nudge
4	1600.00	10.00	6.81	1585.14	178.24	21.29	0.00	0.00	179.51	Start Build
5	2423.56	51.18	6.81	2278.94	585.48	69.92	5.00	0.00	589.64	End Build
6	2670.95	51.18	6.81	2434.03	776.86	92.77	0.00	0.00	782.38	Start Drop
7	3950.40	0.00	6.81	3550.00	1307.51	156.14	4.00	180.00	1316.80	End Drop
8	5645.40	0.00	6.81	5245.00	1307.51	156.14	0.00	6.81	1316.80	TD

WELL DETAILS Name +N/-S +E/-W Northing Easting Latitude Longitude Slot Southarn Canyon 10-25-11-32 0.00 0.00 7143763.71 39°54'26.310N 109°07'57.160W 2304446.50 N/A

RKB Elevation: 5764.0 Ground Elevation: 5747.7

Green River

Start Nudge

# FIELD DETAILS

Uintah, Utah Utah Central Zone U.S.A.

Created By: Scott Wallace 7/11/06

Geodetic System: US State Plane Coordinate System 1983 Ellipsoid: GRS 1980 Zone: Utah, Central Zone Magnetic Model: igrf2005

System Datum: Mean Sea Level Local North: True North

#### SITE DETAILS

SW/NW 32-108-25E Sec. 32, T10S, R25E, Uintah County, Utah 1974 FNL & 505 FWL

Site Centre Latitude: 39°54'26.310N Longitude: 109°07'57.160W

Ground Level: 5747.70
Positional Uncertainty: 0.00
Convergence: 1.52

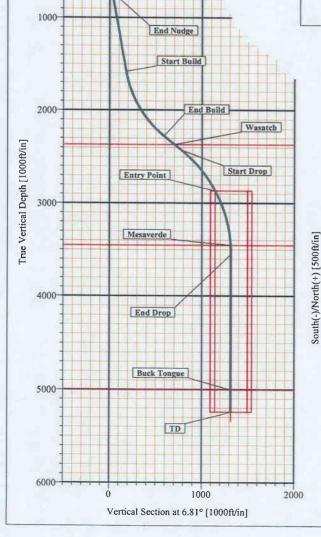
#### TARGET DETAILS

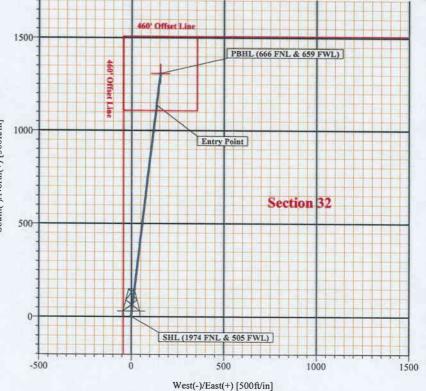
Name TVD +N/-S +E/-W Shape

10-25-11-32 Target 5245.00 1307.51 156.14 Rectangle (400x400)

#### FORMATION TOP DETAILS

No. TVDPath MDPath Formation 179.00 179.00 Green River Wasatch 2369.00 3454.00 2567.22 3854.33 Mesaverde Buck Tongue 5004.00 5404.40







**Planning Report** 

Enduring Resources Uintah, Utah Company:

Field:

SW/NW 32-10S-25E

Southam Canyon 10-25-11-32 Well:

Wellpath:

Site:

Vertical (TVD) Reference:

Date: 7/11/2006 Time: 15:00:53 Pag Co-ordinate(NE) Reference: Well: Southam Canyon 10-25-11-32 SITE 5764.0

Section (VS) Reference:

Well (0.00N,0.00E,6,81Azl)

Plan #1

Field: Uintah, Utah

Utah Central Zone

U.S.A.

Map System: US State Plane Coordinate System 1983

Geo Datum: GRS 1980 Sys Datum: Mean Sea Level Map Zone:

Utah, Central Zone

Coordinate System: Geomagnetic Model: Well Centre igrf2005

Site:

SW/NW 32-10S-25E

Sec. 32, T10S, R25E, Uintah County, Utah

1974 FNL & 505 FWL

Site Position; From: Geographic Northing: Easting:

7143763.71 ft 2304446.50 ft

Latitude: Longitude:

26.310 N 39 54 109

North Reference: Grid Convergence: 57.160 W True

0.00 ft **Position Uncertainty:** Ground Level:

5747.70 ft

6/26/2006

Depth From (TVD)

Slot Name:

1.52 deg

Well: Southam Canyon 10-25-11-32

Well Position:

+N/-S +E/-W 0.00 ft Northing: 0.00 ft Easting:

7143763.71 ft 2304446.50 ft

Latitude: Longitude:

**Drilled From:** 

54 26.310 N 39 109 57.160 W

Position Uncertainty:

Wellpath: 1

**Current Datum:** 

Magnetic Data:

Field Strength:

Plan;

Principal:

Vertical Section:

0.00 ft

52883 nT

Height 5764.00 ft

+N/-S

ft

0.00

Tie-on Depth: Above System Datum:

ft

0.00

Surface Mean Sea Level

Declination: Mag Dip Angle: +E/-W

11.54 deg 66.00 deg

0.00 ft

Direction deg 6.81

6/26/2006

0.00

Date Composed: Version:

Tied-to:

From Surface

Plan Section Information

Plan #1

Yes

	MD ft	Incl deg	Azim deg	TVD ft	+ <b>N/-S</b> ft <sub>-re-</sub>	+E/-W	DLS deg/100ft	Build deg/100ft	Turn deg/100fl	TFO deg	Targer
1	0.00	0.00	6.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	400.00	0.00	6.81	400.00	0.00	0.00	0.00	0.00	0.00	6.81	
	733.33	10.00	6.81	731.64	28.81	3.44	3.00	3.00	0.00	6.81	
!	1600.00	10.00	6.81	1585.14	178.24	21.29	0.00	0.00	0.00	0.00	
	2423.56	51.18	6.81	2278.94	585.48	69.92	5.00	5.00	0.00	0.00	
	2670.95	51.18	6.81	2434.03	776.86	92.77	0.00	0.00	0.00	0.00	
	3950.40	0.00	6.81	3550.00	1307.51	156.14	4.00	-4.00	0.00	180.00	
	5645.40	0.00	6.81	5245.00	1307.51	156.14	0.00	0.00	0.00	6.81	10-25-11-32 Target

Section 1: Start Hold

MD Incl	Azim TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	TFO	
ff deg	deg ft	ft	ft	ft	deg/100ft	deg/100fi	deg/100ft	deg	
0.00 0.00	6.81 0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00 0.00	6.81 400.00	0.00	0.00	0.00	0.00	0.00	0.00	6.81	

Section 2: Start Build 3.00

MD	Incl	Azim	TVD	+N/-S	+E/-W	VS -	DLS	Build	Turn	TFO
ft	deg	deg	ft	ft,	<b>ft</b> .	ft.	deg/100ft	deg/100ft	deg/100ft	deg
500.00	3.00	6.81	499.95	2.60	0.31	2.62	3.00	3.00	0.00	0.00
600.00	6.00	6.81	599.63	10.39	1.24	10.46	3.00	3.00	0.00	0.00
700.00	9.00	6.81	698.77	23.35	2.79	23.51	3.00	3.00	0.00	0.00
733.33	10.00	6.81	731.64	28.81	3.44	29.02	3.00	3.00	0.00	0.00



# **Planning Report**

					1411111	ing Kepo	1 t				
Company: Field: Site: Well: Wellpath:	Enduring Res Uintah, Utah SW/NW 32-1 Southam Car 1	0S-25E	5-11-32		na c	Date: 7/11/2 Co-ordinate(N Vertical (TVD) Section (VS) R Plan:	E) Reference: Reference:	SITE 576 Well (0.0	utham Car	6.81Azi)	Page: 2 11:32
Section	3 : Start Hold										
MD ft	incl deg	Azim deg	TVD T	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Tura deg/100fi	TFO deg	t a magnetic Plants
800.00	10.00	6.81	797.30	40.31	4.81	40.59	0.00	0.00	0.00	0.00	CO. C. P. CHELLER S. C.
900.00	10.00	6.81	895.78	57.55	6.87	57.96	0.00	0.00	0.00	0.00	
1000.00	10.00	6.81	994.26	74.79	8.93	75.32	0.00	0.00	0.00	0.00	
1100.00	10.00	6.81	1092.74	92.03	10.99		0.00	0.00	0.00	0.00	
1200.00	10.00	6.81	1191.22	109.27	13.05		0.00	0.00	0.00	0.00	
1300.00 1400.00	10.00 10.00	6.81 6.81	1289.70 1388.18	126.52 143.76	15.11 17.17		0.00 0.00	0.00 0.00	0.00 0.00	0.00	
1500.00	10.00	6.81	1486.66	161.00	19.23		0.00	0.00	0.00	0.00	
1600.00	10.00	6.81	1585.14	178.24	21.29		0.00	0.00	0.00	0.00	
Section	4 : Start Build	5.00									
MD	Incl	Azim	TYD	+N/-S	+E/-W		DLS	Build	Turn	TFO	e se illigiose s
ft.	deg	deg	Я. С.	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg	7
1700.00	15.00	6.81	1682.74	199.73	23.85		5.00	5.00	0.00	0.00	
1800.00	20.00	6.81	1778.08	229.58	27.42		5.00	5.00	0.00	0.00	
1900.00	25.00	6.81	1870.44	267.56	31.95		5.00	5.00	0.00	0.00	
2000.00	30.00 35.00	6.81 6.81	1959.12 2043.43	313.40 366.73	37.43 43.80		5.00 5.00	5.00 5.00	0.00 0.00	0.00 0.00	
2200.00	40.00	6.81	2122.74	427.16	51.01		5.00	5.00	0.00	0.00	
2300.00	45.00	6.81	2196.44	494.22	59.02		5.00	5.00	0.00	0.00	
2400.00	50.00	6.81	2263.98	567.40	67.76		5.00	5.00	0.00	0.00	
2423.56	51.18	6.81	2278.94	585.48	69.92	589.64	5.00	5.00	0.00	0.00	
la accessor a company	5 : Start Hold	wks6di -				·			and built in a street and a second		economica TT Column con a Manager reconstruction C. J.
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+EЉW ft	VS fi	DLS deg/100ft	Build deg/100ft	Tura deg/100ft	TFO deg	
2500.00	51.18	6.81	2326.86	644.61	76.98		0.00	0.00	0.00	0.00	
2567.22	51.18	6.81	2369.00	696.62	83.19		0.00	0.00	0.00	0.00	
2600.00 2670.95	51.18 51.18	6.81 6.81	2389.55 2434.03	721.97 776.86	86.22 92.77		0.00 0.00	0.00	0.00 0.00	0.00 0.00	
	6 : Start Drop				V2	102.00				0.00	
5711 Par 5 000	ES AND VALUE OF THE PARTY OF TH	151 VIII VIII VIII VIII VIII VIII VIII V	7575	STATE OF STREET	in in the second	n nemen	TOT OF STATE	Wn_11.4	an.		0.888 - 1 1 1 <del>-1</del> 854 834
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	ft	DLS deg/100ft	Niladinaki seri 🗀 🖯		70280345-T	
2700.00	50.02	6.81	2452.47	799.15	95.43		4.00	-4.00	0.00	-180.00	
2800.00 2900.00	46.02 42.02	6.81	2519.35	872.94	104.25	0.40.00	4.00	-4.00 4.00	0.00	180.00	
3000.00	38.02	6.81 6.81	2591.25 2667.82	941.92 1005.76	112.48 120.11		4.00 4.00	-4.00 -4.00	0.00	180.00 180.00	
3100.00	34.02	6.81	2748.69	1064.13	127.08		4.00	-4.00	0.00	180.00	
3200.00	30.02	6.81	2833.46	1116.76	133.36	1124.70	4.00	-4.00	0.00	180.00	
3240.72	28.39	6.81	2869.00	1136.49	135.72		4.00	-4.00	0.00	180.00	
3300.00	26.02	6.81 6.81	2921.72	1163.39	138.93		4.00	-4.00 4.00	0.00	-180.00	
3400.00 3500.00	22.02 18.02	6.81 6.81	3013.05 3106.99	1203.80 1237.78	143.76 147.81		4.00 4.00	-4.00 -4.00	0.00 0.00	180.00 180.00	
3600.00	14.02	6.81	3203.09	1265.17	151.09		4.00	-4.00 -4.00	0.00	180.00	
3700.00	10.02	6.81	3300.88	1285.83	153.55	1294.97	4.00	-4.00	0.00	180.00	
3800.00	6.02	6.81	3399.88	1299.68	155.21	1308.91	4.00	-4.00	0.00	180.00	
3854.33	3.84	6.81	3454.00	1304.31	155.76		4.00	-4.00	0.00	180.00	
3900.00 3950.40	2.02 0.00	6.81 6.81	3499.61 3550.00	1306.63 1307.51	156.04 156.14		4.00 4.00	-4.00 -4.00	0.00 0.00	-180.00 -180.00	
l	7 : Start Hold			1001,01	100.14	1010,00	7.00	00	0.00	- 100.00	
MD***	_	Azim deg	TVD ft	+N/-S ft	+E/-W	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft		
4000.00	0.00	6.81	3599.60	1307.51	156.14	·	0.00	0.00	0.00	6.81	*
4100.00	0.00	6.81	3699.60	1307.51	156.14		0.00	0.00	0.00	6.81	
4200.00	0.00	6.81	3799.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	
4300.00	0.00	6.81	3899.60	1307.51	156.14		0.00	0.00	0.00	6.81	
4400.00 4500.00	0.00 0.00	6.81 6.81	3999.60 4099.60	1307.51 1307.51	156.14 156.14		0.00 0.00	0.00 0.00	0.00 0.00	6.81 6.81	
L7300.00			7099.00	1007.01	100.14	1310,00		V.UU	0.00	ψ.Φ1	



Company: Enduring Resources
Field: Uintah Utah
Site: SW/NW 32-10S-25E
Well: Southam Canyon 10-25-11-32
Wellpath: 1

Date: 7/11/2006 Time: 15:00:53 Page: 3
Co-ordinate(NE) Reference: Well Southam Canyon 10-25-11-32
Vertical (TVD) Reference: SITE 5764.0
Section (VS) Reference: Well (0.00N,0.00E,6.81Azi)
Plan: Plan #1

Section (VS) Reference: Plan:

Section	7 :	Start	Hold

	MD ft	Incl deg	Azim deg	TVD ft	+N/-S fi	+E/-W ft	VS ft	DLS deg/100fl	Build deg/100f	Turn deg/100ft	TFO deg	41
	4600.00	0.00	6.81	4199.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	٦
١.	4700.00	0.00	6.81	4299.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	
Н	4800.00	0.00	6.81	4399.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	i
	4900.00	0.00	6.81	4499.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	
	5000.00	0.00	6.81	4599.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	
	5100.00	0.00	6.81	4699.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	
	5200.00	0.00	6.81	4799.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	
П	5300.00	0.00	6.81	4899.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	Ţ
1	5400.00	0.00	6.81	4999.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	
	5404.40	0.00	6.81	5004.00	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	
	5500.00	0.00	6.81	5099.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	
	5600.00	0.00	6.81	5199.60	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	
П	5645.40	0.00	6.81	5245.00	1307.51	156.14	1316.80	0.00	0.00	0.00	6.81	

#### Survey

MD ft	Incl deg	Azim deg	TVD it	+N/-S ft	+E/-W ft	VS ft	DLS deg/100fi		Turn deg/100ft	Tool/Comment (1011)
400.00	0.00	6.81	400.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Nudge
500.00	3.00	6.81	499.95	2.60	0.31	2.62	3.00	3.00	0.00	MWD
600.00	6.00	6.81	599.63	10.39	1.24	10.46	3.00	3.00	0.00	MWD
700.00	9.00	6.81	698.77	23.35	2.79	23.51	3.00	3.00	0.00	MWD
733.33	10.00	6.81	731.64	28.81	3.44	29.02	3.00	3.00	0.00	End Nudge
800.00	10.00	6.81	797.30	40.31	4.81	40.59	0.00	0.00	0.00	MWD
900.00	10.00	6.81	895.78	57.55	6.87	57.96	0.00	0.00	0.00	MWD
	10.00	6.81	994.26	74.79	8.93	75.32	0.00	0.00	0.00	MWD
1100.00 1200.00	10.00	6.81	1092.74	92.03	10.99	92.69	0.00	0.00	0.00	MWD
1200.00	10.00	6.81	1191.22	109.27	13.05	110.05	0.00	0.00	0.00	MWD
1300.00	10.00	6.81	1289.70	126.52	15.11	127.42	0.00	0.00	0.00	MWD
1400.00	10.00	6.81	1388.18	143.76	17.17	144.78	0.00	0.00	0.00	MWD
1500.00	10.00	6.81	1486.66	161.00	19.23	162.15	0.00	0.00	0.00	MWD
1600.00	10.00	6.81	1585.14	178.24	21.29	179.51	0.00	0.00	0.00	Start Build
1700.00	15.00	6.81	1682.74	199.73	23.85	201.15	5.00	5.00	0.00	MWD
1800.00	20.00	6.81	1778.08	229.58	27.42	231.21	5.00	5.00	0.00	MWD
1900.00	25.00	6.81	1870.44	267.56	31.95	269.46	5.00	5.00	0.00	MWD
2000.00	30.00	6.81	1959.12	313.40	37.43	315.62	5.00	5.00	0.00	MWD
2100.00	35.00	6.81	2043.43	366.73	43.80	369.34	5.00	5.00	0.00	MWD
2200.00	40.00	6.81	2122.74	427.16	51.01	430.19	5.00	5.00	0.00	MWD
2300.00	45.00	6.81	2196.44	494.22	59.02	497.73	5.00	5.00	0.00	MWD
2400.00	50.00	6.81	2263.98	567.40	67.76	571.44	5.00	5.00	0.00	MWD
2423.56	51.18	6.81	2278.94	585.48	69.92	589.64	5.00	5.00	0.00	End Build
2500.00	51.18	6.81	2326.86	644.61	76.98	649.19	0.00	0.00	0.00	MWD
2567.22	51.18	6.81	2369.00	696.62	83.19	701.57	0.00	0.00	0.00	Wasatch
2600.00	51.18	6.81	2389.55	721.97	86.22	727.10	0.00	0.00	0.00	MWD
2670.95	51.18	6.81	2434.03	776.86	92.77	782.38	0.00	0.00	0.00	Start Drop
2700.00 2800.00	50.02	6.81	2452.47	799.15	95.43	804.83	4.00	-4.00	0.00	MWD
2900.00	46.02	6.81	2519.35	872.94	104.25	879.14	4.00	-4.00	0.00	MWD
2900.00	42.02	6.81	2591.25	941.92	112.48	948.62	4.00	-4.00	0.00	MWD
3000.00	38.02	6.81	2667.82	1005.76	120.11	1012.90	4.00	-4.00	0.00	MWD
3100.00	34.02	6.81	2748.69	1064.13	127.08	1071.69	4.00	-4.00	0.00	MWD
3200.00	30.02	6.81	2833.46	1116.76	133.36	1124.70	4.00	-4.00	0.00	MWD
3240.72	28.39	6.81	2869.00	1136.49	135.72	1144.56	4.00	-4.00	0.00	Entry Point
3300.00	26.02	6.81	2921.72	1163.39	138.93	1171.66	4.00	-4.00	0.00	MWD
3400.00	22.02	6.81	3013.05	1203.80	143.76	1212.35	4.00	-4.00	0.00	MWD
3500.00	18.02	6.81	3106,99	1237.78	147.81	1246.57	4.00	-4.00	0.00	MWD
3600.00	14.02	6.81	3203.09	1265.17	151.09	1274.16	4.00	-4.00	0.00	MWD
3700.00	10.02	6.81	3300.88	1285.83	153.55	1294.97	4.00	-4.00	0.00	MWD



Company: Enduring Resources
pricial: Ulmah, Utah
Stre: SW/NW 32-10S-25E

Well: Southam Canyon 10-25-11-32
Wellpath: 1

Date: 7/11/2006 Time: 15:00:53 Page:
Co-ordinate(NE) Reference: Well: Southam Canyon 10-25-11-32
Vertical (IYD) Reference: SIIE 5764.0
Section (VS) Reference: Well (0.00N,0.00E,6.81Azl)
Plan:

Well (0.00N,0.00E,6.81Azi) Plan #1

Sw	rvey
	MD
	i in

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+ <b>E/-W</b> ft	VS ft	DLS deg/100ft		Turn deg/100ft	Tool/Comment
3800.00		COLOR DE COME TO GEZ LA 2015 : 100 100	(2007) (2009) (1000) (1000)	1299.68	155.21	1308.91	7/00/07/01/07 ·	-4.00	0.00	MWD
3600.00	6.02	6.81	3399.88	1299.00	199.21	1300.91	4.00	-4.00	0.00	טיייטו
3854.33	3.84	6.81	3454.00	1304.31	155.76	1313.58	4.00	-4.00	0.00	Mesaverde
3900.00	2.02	6.81	3499.61	1306.63	156.04	1315.91	4.00	-4.00	0.00	MWD
3950.40	0.00	6.81	3550.00	1307.51	156.14	1316.80	4.00	-4.00	0.00	End Drop
4000.00	0.00	6.81	3599.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
4100.00	0.00	6.81	3699.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
4200.00	0.00	6.81	3799.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
4300.00	0.00	6.81	3899.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
4400.00	0.00	6.81	3999.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
4500.00	0.00	6.81	4099.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
4600.00	0.00	6.81	4199.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
4700.00	0.00	6.81	4299.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
4800.00	0.00	6.81	4399.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
4900.00	0.00	6.81	4499.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
5000.00	0.00	6.81	4599.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
5100.00	0.00	6.81	4699.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
5200.00	0.00	6.81	4799.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
5300.00	0.00	6.81	4899.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
5400.00	0.00	6.81	4999.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
5404.40	0.00	6.81	5004.00	1307.51	156.14	1316.80	0.00	0.00	0.00	Buck Tongue
5500.00	0.00	6.81	5099.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
5600.00	0.00	6.81	5199.60	1307.51	156.14	1316.80	0.00	0.00	0.00	MWD
5645.40	0.00	6.81	5245.00	1307.51	156.14	1316.80	0.00	0.00	0.00	10-25-11-32 Target

#### Targets

Name Description Dip.	- CONTRA	+N/-S ft	+E/-W	Map Map Northing Easting ft ft	0000 W 999W	Latitude Min Sec		— Long eg Min	gtude> Sec
10-25-11-32 Target -Rectangle (400x400) -Plan hit target	5245,00	1307.51	156.14	7145074.89 2304567.98	39	54 39.233	3 N 10	9 7 5	55.156 W

#### Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle I deg	Dip Direction deg
179.00 2567.22	179.00 2369.00	Green River		0.00 0.00	0.00 0.00
3854.33	3454.00	Wasatch Mesaverde		0.00	0.00
5404.40	5004.00	Buck Tongue		0.00	0.00

#### Annotation

MD ft	TVD ft	
		SHL (1974 FNL & 505 FWL)
400.00	400.00	Start Nudge
733.33	731.64	End Nudge
1600.00	1585.14	Start Build
2423.56	2278.94	End Build
2670.95	2434.03	Start Drop
3240.72	2869.00	Entry Point
3950.40	3550.00	End Drop
5645.40	5245.00	TD '
5645.40	5245.00	PBHL (666 FNL & 659 FWL)

# ENDURING RESOURCES

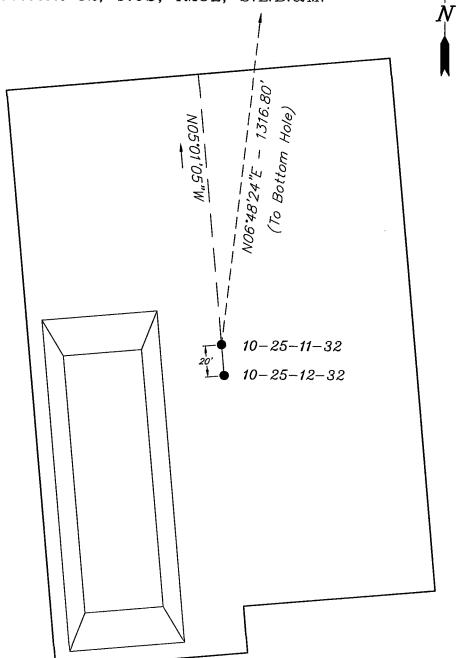
WELL PAD INTERFERENCE PLAT SOUTHAM CANYON 10-25-12-32 SOUTHAM CANYON 10-25-11-32 Section 32, T10S, R25E, S.L.B.&M.

#### TOP HOLE FOOTAGES

10-25-12-32 1994' FNL & 507' FWL 10-25-11-32 1974' FNL & 505' FWL

#### **BOTTOM HOLE FOOTAGES**

10-25-12-32 <u>VERTICAL</u> 10-25-11-32 666' FNL & 659' FWL



#### Note:

Bearings are derived using G.L.O. Information.

RELATIVE COORDINATES					
From	top	hole	to	bottom	hole

WELL	NORTH	EAST		
12-32	N/A	N/A		
11-32	1,308'	156'		

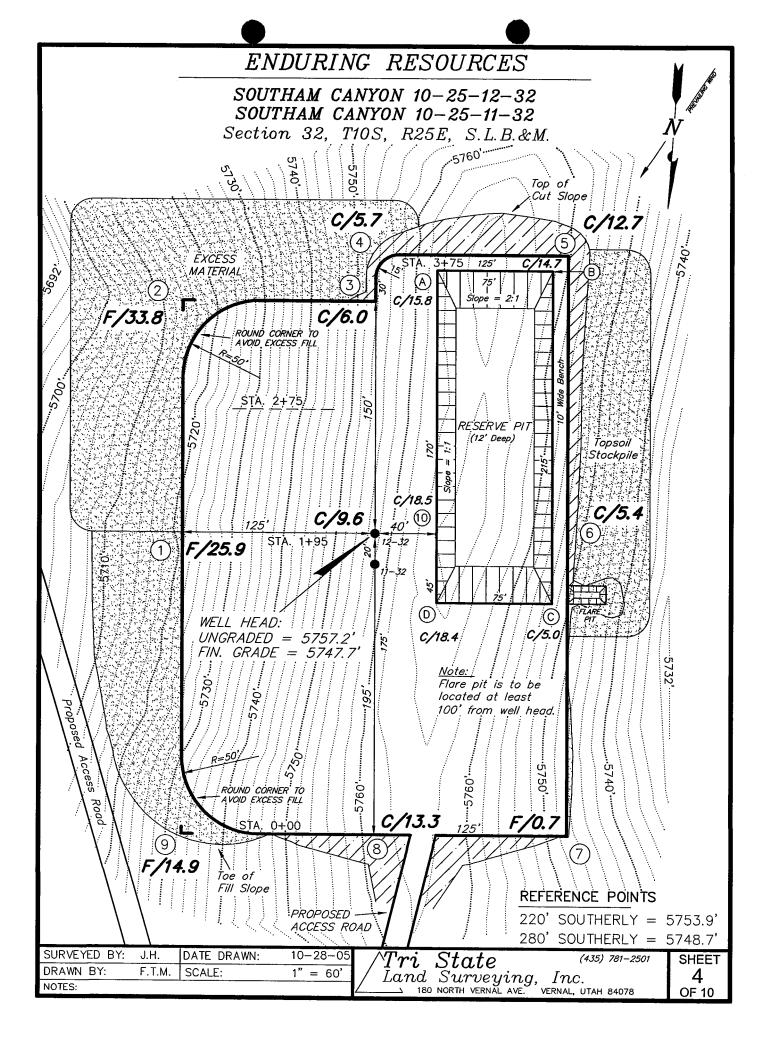
١	
	TAMIMITED S. LONGIMITED
	$LATITUDE \ \& \ LONGITUDE$
	Surface position of Wells (NAD 83)
	Dantace position of wells (NAD 63)

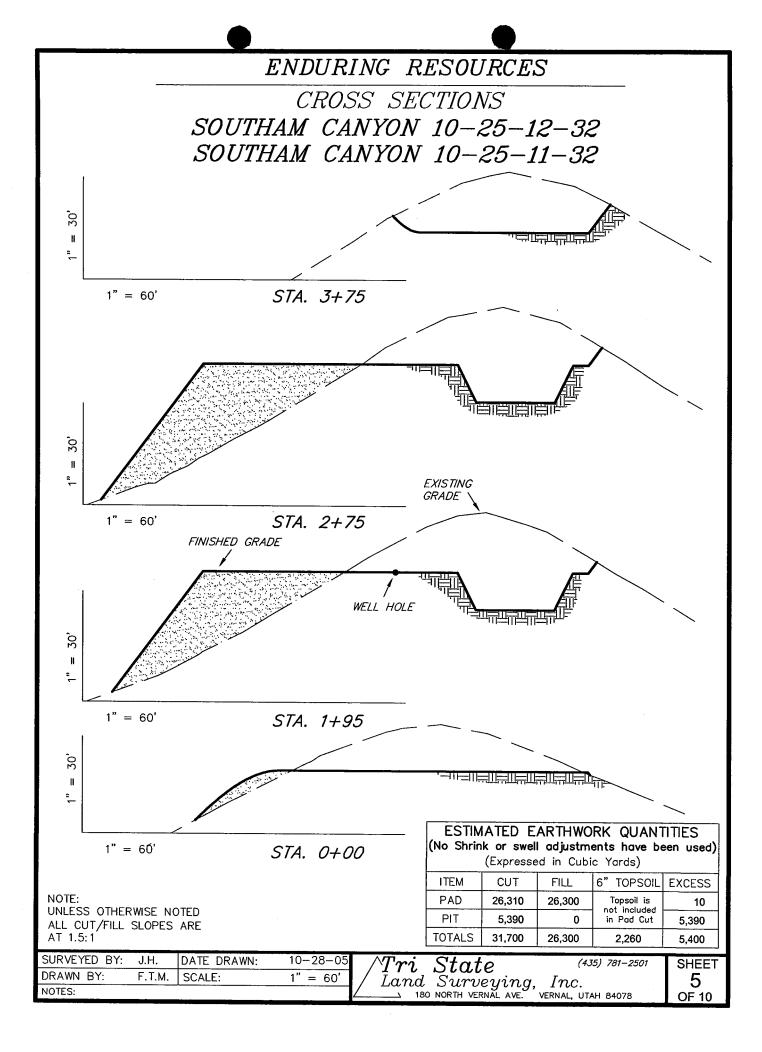
WELL	LATITUDE	LONGITUDE		
12-32	39° 54' 26.11"	109* 07' 57.13"		
11-32	39° 54' 26.31"	109° 07' 57.16"		

SHEET 3 OF 10

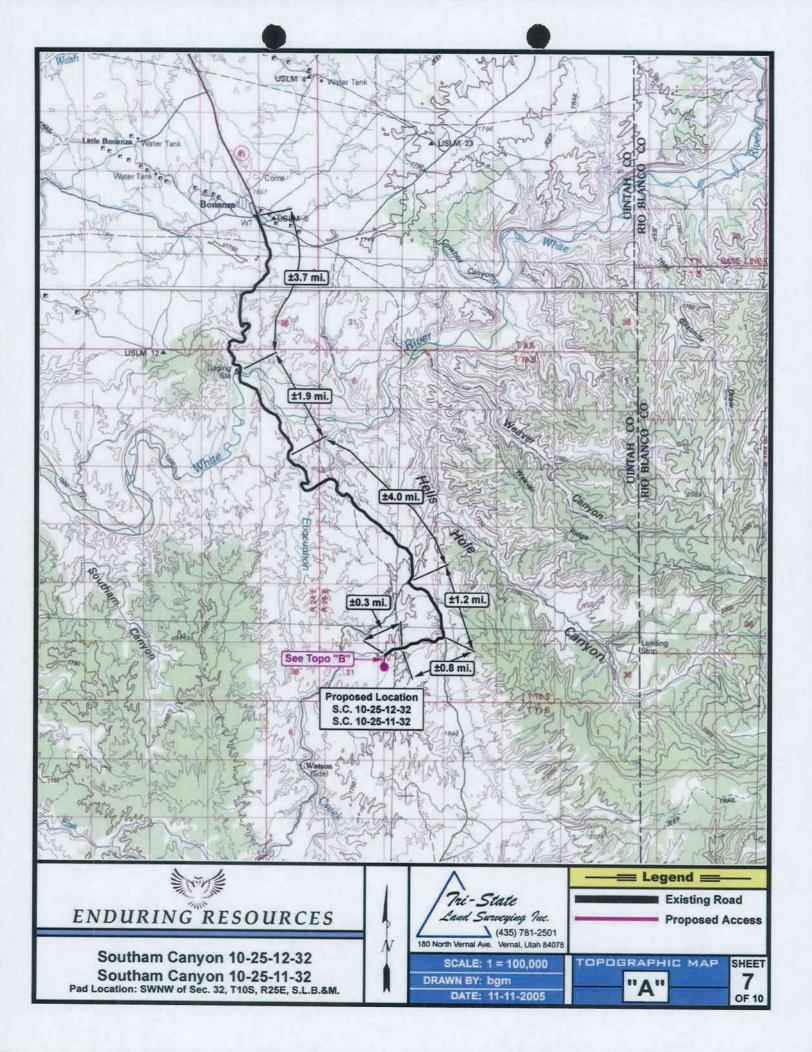
SURVEYED BY:	J.H.	DATE DRAWN:	10-28-05
DRAWN BY:	F.T.M.	SCALE:	1" = 60'
NOTES:			

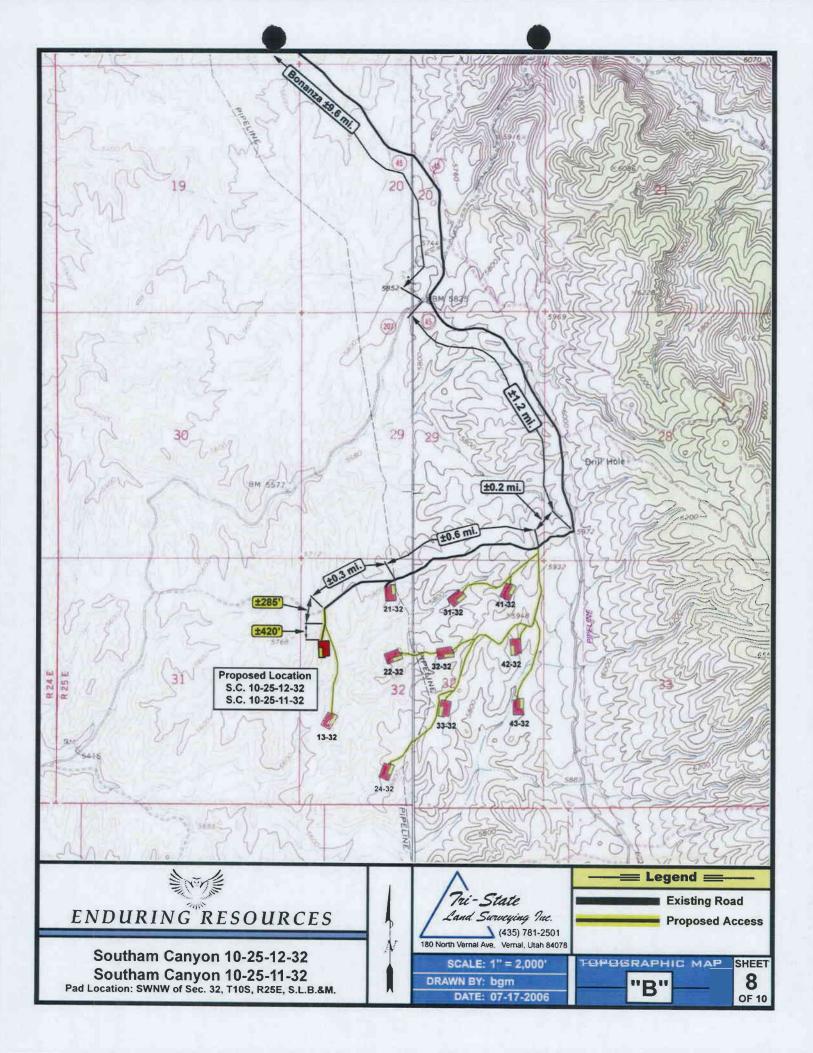
A	
riangle Tri $State$	(435) 781–2501
/ III Diwie	( ,
Land Samonaina	I on a
Land Surveying,	17tC.
	VERNAL LITAH 84078

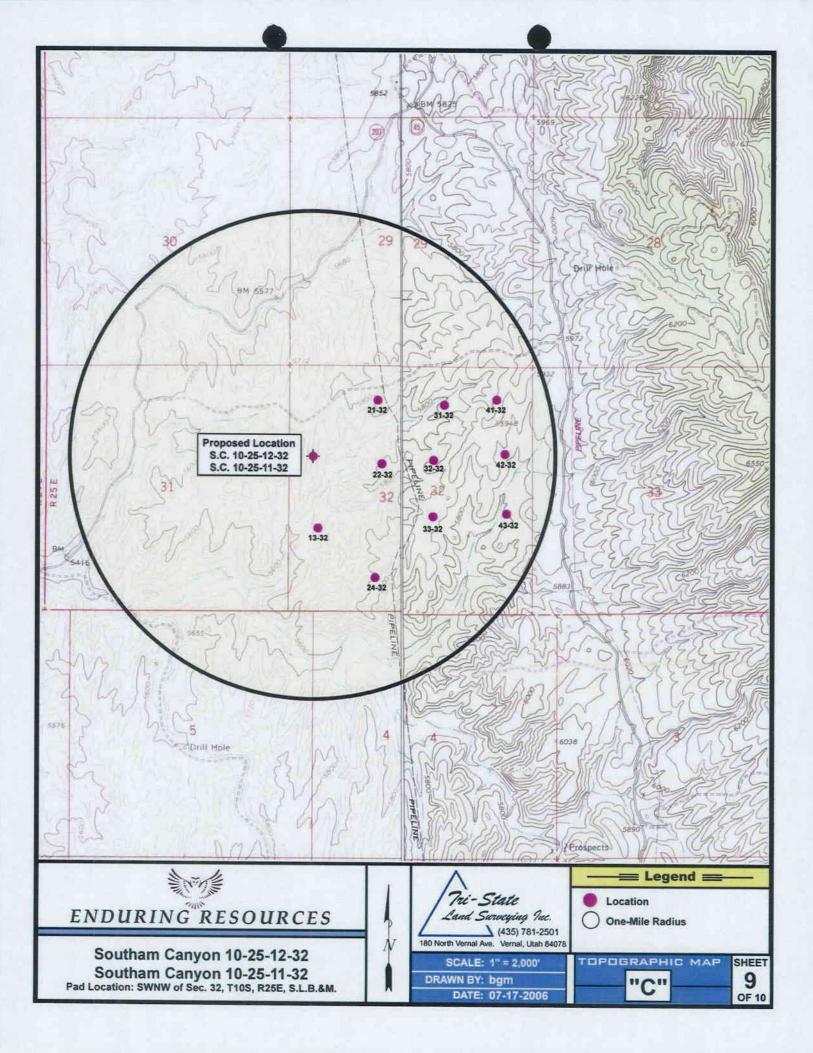


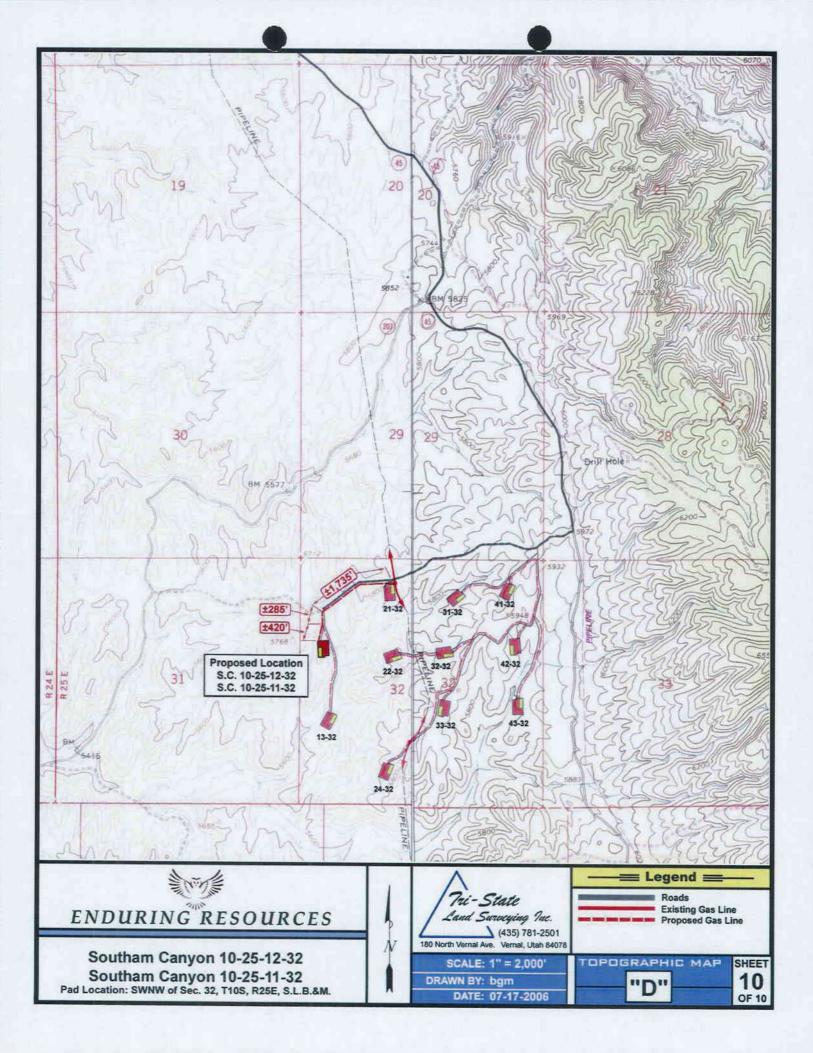


# ENDURING RESOURCES TYPICAL RIG LAYOUT SOUTHAM CANYON 10-25-12-32 SOUTHAM CANYON 10-25-11-32 125 TRASH 50, RESERVE PIT (12' Deep) FUEL TOOLS POWER ☐ TOILET HOPPER TANKS TRAILERS PUMP Š 125' DOG HOUSE TRAILERS Note: PIPE RACKS Flare pit is to be located at least 100' from well head. proposed 95, PROPOSED -ACCESS ROAD Tri State (435) 781–28. Land Surveying, Inc. $\_$ 180 NORTH VERNAL AVE. VERNAL, UTAH 84078 SURVEYED BY: J.H. DATE DRAWN: 10-28-05 (435) 781-2501 SHEET DRAWN BY: F.T.M. SCALE: 1" = 60'6 NOTES: OF 10











100%

ENDURING RESOURCES S.C. 10-25-12-32 & S.C. 10-25-11-32 Pad Location: SWNW of Sec. 32, T10S, R25E, S.L.B.&M.

CENTER STAKE

Date Photographed: 11/15/2005

Date Drawn: 11/15/2005 Drawn By: bgm

LOOKING SOUTH

Tri-State Land Surveying Inc.

(435) 781-2501 180 North Vernal Ave. Vernal, Utah 84078







ENDURING RESOURCES S.C. 10-25-12-32 & S.C. 10-25-11-32 Pad Location: SWHW of Sec. 32, T10S, R28E, S.L.B.&M.

## NORTH

Date Photographed: 11/15/2005

Date Drawn: 11/15/2005 Drawn By: bgm

Tri-State Land Surveying Tec. (435) 781-2501 180 North Vernal Ave. Vernal, Utah 84078

EAST





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ENDURING RESOURCES S.C. 10-25-12-32 & S.C. 10-25-11-32

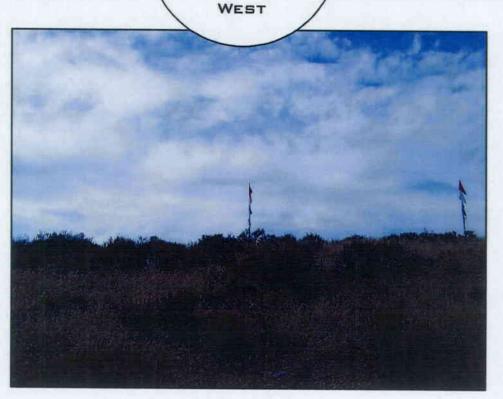
Pad Location: SWNW of Sec. 32, T10S, R25E, S.L.B.&M.

SOUTH

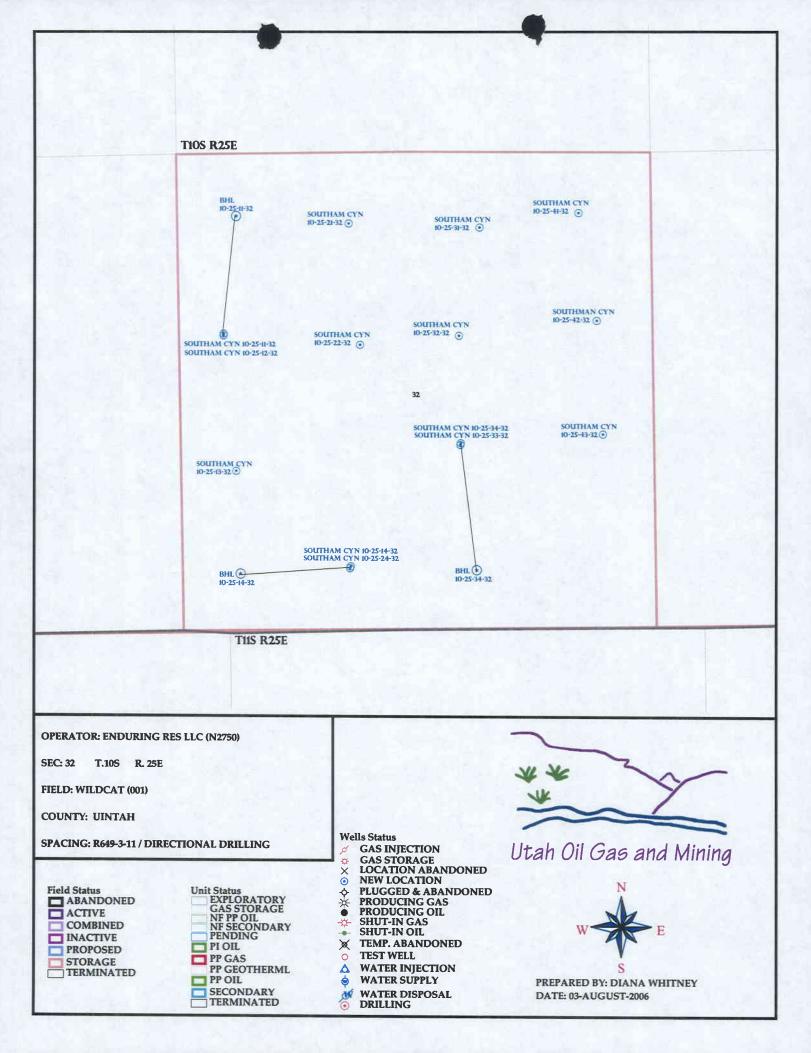
Date Photographed: 11/15/2005

Date Drawn: 11/15/2005 Drawn By: bgm

7ri - State
Laud Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078



APD RECEIVED: 07/20/2006		API NO. ASSIGNED: 43-047-38395			
WELL NAME: SOUTHAM CYN 10-25-	11-32				
OPERATOR: ENDURING RESOURCES	, LLC ( N2750 )	PHONE NUMBER: 303-350-5114		14	
CONTACT: AL ARLIAN					
PROPOSED LOCATION:		INSPECT LOCATN	BY: /	/	
SWNW 32 100S 250	E	Tech Review	Initials	Date	
SURFACE: 1974 FNL 0505 FWL			111101015	Date	
BOTTOM: 0666 FNL 0659 FWL		Engineering	DKD	9/20/06	
COUNTY: UINTAH		Geology		· C	
LATITUDE: 39.90724 LONGITU		Surface			
UTM SURF EASTINGS: 659683 FIELD NAME: WILDCAT	NORTHINGS: 4418923 ( 1 )	Burrace			
LEASE TYPE: 3 - State  LEASE NUMBER: ML-47065  SURFACE OWNER: 3 - State	- ,	PROPOSED FORMAT			
RECEIVED AND/OR REVIEWED: LOCATION AND SITING:					
Plat	F	R649-2-3.			
Bond: Fed[] Ind[] Sta[] 1	Fee[]	Unit:			
(No. RLB0008031	)				
Potash (Y/N)		R649-3-2. General			
Oil Shale 190-5 (B) or 1					
Water Permit (No. 49-222	,   — F	R649-3-3. Exception			
RDCC Review (Y)N)	, I	Drilling Unit			
(Date: 08/18/2006	)	Board Cause No:			
Fee Surf Agreement (Y/N	<u>,,</u>	Eff Date: Siting:			
<u></u> <b>\Lip</b> Intent to Commingle (Y/	N) F	R649-3-11. Dire	ctional Dri	.11	
COMMENTS: Leeds (	Desir (03-07-0	6)			
<u> </u>					
STIPULATIONS: 1- Spa Cons Ship					
2-STATEMENT OF BASIS					
3-5uf- (sq (mt st.p					



## DIVISION OF OIL, GAS AND MINING APPLICATION FOR PERMIT TO DRILL STATEMENT OF BASIS

OPERATOR:	ENDURING RESOU	URCES, LLC.	
WELL NAME & NUMBER:	SOUTHAM CANYO	ON 10-25-11-3	2
API NUMBER:	43-047-38395		
LOCATION: 1/4,1/4 <u>SWNW</u> Sec:		<u>5E 1974'</u> FNL	_505' FWL
Geology/Ground Water:			
of Division of Water Rights record	nated to be at a depth of s shows no water well vite is the Uinta-Green R interbedded with shale on should be found near	f 5,700'which is within a 10,000 diver Formation es and is expected the surface. The surface of	s below the proposed T.D. A search foot radius of the center of Section transition. The Uinta Formation ted to have limited value as an The Green River Formation may
Reviewer: Brace	1 Hill	Date: 08-2	4-06
Surface:			
minerals. Due to harsh weather, Jin take place in his absence. Doug Har closely match the surroundings. B	n Davis from SITLA wa mmond expressed willing ten Williams of DWR s se of the critical deer cla	s not present bungness and designated that this assification, Mr	This site is on state surface, with state at expressed that the pre-sites should still re to paint the location tanks in a color to section is classified as critical deer and . Williams requested that the location be
Reviewer: Richard	l Powell	Date:	03/07/2006

1. A synthetic liner with a minimum thickness of 12 mils shall be properly installed and maintained in the reserve

**Conditions of Approval/Application for Permit to Drill:** 

pit.

# ON-SITE PREDRILL EVALUATION Division of Oil, Gas and Mining

**OPERATOR:** ENDURING RESOURCES, LLC

WELL NAME & NUMBER: SOUTHAM CANYON 10-25-11-32

**API NUMBER:** 43-047-38395

LEASE: ML-47065 FIELD/UNIT: UNDESIGNATED

LOCATION: 1/4,1/4 SWNW Sec: 32 TWP: 10S RNG: 25E 1974' FNL 505' FWL LEGAL WELL SITING: 460 F SEC. LINE; 460 F 1/4,1/4 LINE; 920 F ANOTHER WELL.

GPS COORD (UTM): 4418933Y 0659691X SURFACE OWNER: SITLA.

### **PARTICIPANTS**

Richard Powell (DOGM), Doug Hammond (Enduring Resources), Larry Rowell (Ponderosa Oilfield Service), Chris Stewart & Dustin Laub (TriState Land Surveying).

## REGIONAL/LOCAL SETTING & TOPOGRAPHY

Location is set upon a small steep north-south running ridge. Hills and ridges dominate the terrain of this section, with rock formations protruding from the tops of many of the slopes. The slopes of the western half of this section are much more gradual. The ridges generally seem to run from north to south. Drainage is westward to Evacuation Creek. To the east of this section, are much taller and steeper slopes. Bonanza, UT is approximately 11 miles to the north.

#### SURFACE USE PLAN

CURRENT SURFACE USE: Wildlife & Livestock grazing.

PROPOSED SURFACE DISTURBANCE: Location will be 375' by 250'. Proposed new access road to be approximately 705'. The last 420' is for this well only; the first 285' is shared as part of the access to the proposed Southam Canyon 10-25-13-32.

LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS: See attached map from  $\underline{\text{GIS}}$  database.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: All production facilities will be on location and added after drilling well. Pipeline

SOURCE OF CONSTRUCTION MATERIAL: Al construction material will be borrowed from site during construction of location.

ANCILLARY FACILITIES: None will be required.

WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST OF CONCERNS? (EXPLAIN): Unlikely.

#### WASTE MANAGEMENT PLAN:

Drilled cuttings will be settled into reserve pit. Liquids from pit will

be allowed to evaporate. Formation water will be confined to storage tanks. Portable toilets, sewage holding tanks, and onsite sewage treatment equipment will be handled by commercial contractors and regulated by the appropriate health authority. Trash will be contained in trash baskets and disposed of at an approved landfill.

#### ENVIRONMENTAL PARAMETERS

AFFECTED FLOODPLAINS AND/OR WETLANDS: none

FLORA/FAUNA: <u>Sagebrush</u>, <u>Greasewood</u>, <u>halogeton</u>, <u>shadscale</u>, <u>Russian</u> thistle / <u>Deer</u>, <u>elk</u>, <u>Rodents</u>, <u>Coyote</u>, <u>Songbirds</u>, <u>Rabbit</u>, <u>Bobcat</u>, <u>Pronghorn</u>, <u>Cougar</u>.

SOIL TYPE AND CHARACTERISTICS: Light brown silty clay with scattered rock and shale.

EROSION/SEDIMENTATION/STABILITY: <u>Very little natural erosion.</u> <u>Sedimentation and stability are not a problem and location construction shouldn't cause an increase in stability or erosion problems.</u>

PALEONTOLOGICAL POTENTIAL: Paleontology study by IPC on 3/1/06.

#### RESERVE PIT

CHARACTERISTICS: 215' BY 75' and twelve feet deep.

LINER REQUIREMENTS (Site Ranking Form attached): A liner will be required for reserve pit. Site ranking score is 25.

## SURFACE RESTORATION/RECLAMATION PLAN

As per SITLA.

SURFACE AGREEMENT: As per SITLA.

CULTURAL RESOURCES/ARCHAEOLOGY: Archaeology study done by MOAC on 2/20/06.

## OTHER OBSERVATIONS/COMMENTS

This location is shared with the Southam Canyon 10-25-12-32.

#### ATTACHMENTS

Photos of this site were taken and placed on file.

RICHARD POWELL
DOGM REPRESENTATIVE

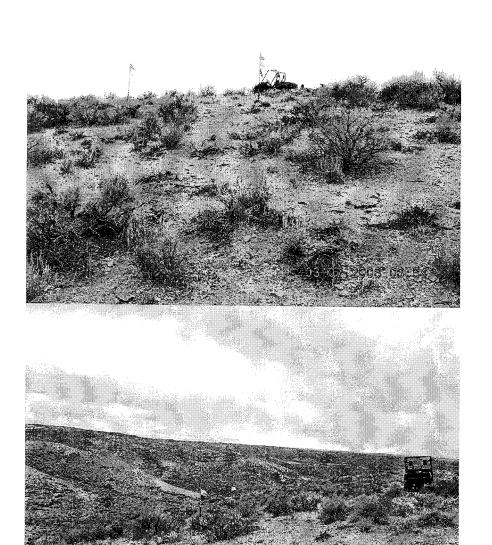
03/07/06 12:35 AM DATE/TIME

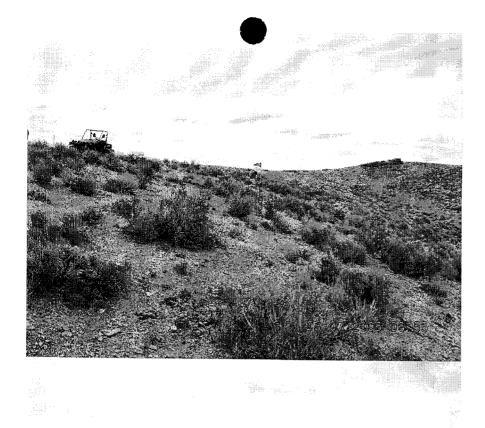
## Equation Ranking Criteria and Ranking Score For Reserve and Onsite Pit Liner Requirements

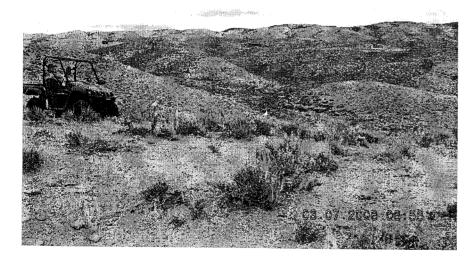
Site-Specific Factors	Ranking	Site Ranking
Distance to Groundwater (feet) >200 100 to 200 75 to 100 25 to 75 <25 or recharge area	0 5 10 15 20	0
Distance to Surf. Water (feet) >1000 300 to 1000 200 to 300 100 to 200 < 100	0 2 10 15 20	0
Distance to Nearest Municipal Well (feet)	0 5 10 20	0
Distance to Other Wells (feet) >1320 300 to 1320 <300	0 10 20	0
Native Soil Type  Low permeability  Mod. permeability  High permeability	0 10 20	_20
Fluid Type Air/mist Fresh Water TDS >5000 and <10000 TDS >10000 or Oil Base Mud Fluid containing significant levels of hazardous constituents	0 5 10 15	5
Drill Cuttings Normal Rock Salt or detrimental	0 10	0
Annual Precipitation (inches) <10 10 to 20 >20	0 5 10	0
Affected Populations <10 10 to 30 30 to 50 >50	0 6 8 10	0
Presence of Nearby Utility Conduits Not Present Unknown Present	0 10 15	0

Final Score 25 (Level I Sensitivity)

Sensitivity Level I = 20 or more; total containment is required.
Sensitivity Level II = 15-19; lining is discretionary.
Sensitivity Level III = below 15; no specific lining is required.







### STATE ACTIONS

## Resource Development Coordinating Committee Governor's Office of Planning and Budget

## 5110 State Office Building SLC, UT 84114

Phone No. 537-9230

1.	S	tate	Aσε	ency
≖•	$\sim$		115	JII C 7

Oil, Gas and Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801 2. Approximate date project will start:

Upon Approval or August 17, 2006

3. Title of proposed action:

Application for Permit to Drill

4. Description of Project:

Enduring Resources, LLC proposes to drill the Southam Canyon 10-25-11-32 well (wildcat) on a State lease ML-47065, Uintah County, Utah. This action is being presented to the RDCC for consideration of resource issues affecting state interests. The Division of Oil, Gas and Mining is the primary administrative agency in this action and must issue approval before operations commence.

5. Location and detailed map of land affected (site location map required, electronic GIS map preferred)

(include UTM coordinates where possible) (indicate county)

1974' FNL 505' FWL, Bottom Location 666' FNL 659' FWL, SW/4 NW/4, Section 32, Township 10 South, Range 25 East, Uintah County, Utah

6. Possible significant impacts likely to occur:

Surface impacts include up to five acres of surface disturbance during the drilling and completion phase (estimated for five weeks duration). If oil and gas in commercial quantities is discovered, the location will be reclaimed back to a net disturbance of between one and two acres – not including road, pipeline, or utility infrastructure. If no oil or gas is discovered, the location will be completely reclaimed.

- 7. Identify local government affected
  - a. Has the government been contacted? No.
  - b. When?
  - c. What was the response?
  - d. If no response, how is the local government(s) likely to be impacted?
- 8. For acquisitions of land or interests in land by DWR or State Parks please identify state representative and state senator for the project area. Name and phone number of state representative, state senator near project site, if applicable:
  - a. Has the representative and senator been contacted? N/A
- **9. Areawide clearinghouse(s) receiving state action:** (to be sent out by agency in block 1) Uintah Basin Association of Governments

10. For further information, contact: 11. Signature and title of authorized officer

Diana Whitney

**Phone:** (801) 538-5312

Still of

Gil Hunt, Associate Director

**Date:** August 3, 2006

#### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

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$-\iota$	ΠN	/1 3

AMENDED REPORT (highlight changes)

		APPLICAT	ION FOR F	PERMIT TO	DRILL		5. MINERAL LEASE		. surface:
1A. TYPE OF WO	RK: [	ORILL 🔽 🛚 F	REENTER	DEEPEN			7. IF INDIAN, ALLO	TTEE OR TRIE	BE NAME:
B. TYPE OF WEI	LL: OIL	GAS 🗾 (	OTHER	SING	GLE ZONE	MULTIPLE ZONI	8. UNIT or CA AGR	EEMENT NAM	IE:
2. NAME OF OPE Enduring R		LLC					9. WELL NAME and Southam C		n_25_11_32
3. ADDRESS OF	OPERATOR:					PHONE NUMBER:	10. FIELD AND PO	OL, OR WILDO	CAT:
		Denve		CO ZIP 802	220	(303) 350-5114	Uncesigna 11. QTR/QTR, SEC		
AT SURFACE:	1974' FNI					109.131928	MWNW 32		25E
AT PROPOSED	PRODUCING Z	one: 666'F! G972U√ 4	NL - 659' FWI !U 19 3a1 √	L NW-NW 32	2-10S-25E	121357			
14. DISTANCE IN	MILES AND DIR	ECTION FROM NEAF	REST TOWN OR POS	39.9/088 ST OFFICE:			12. COUNTY:	1	3. STATE: UTAH
	west of Bo						Uintah		
		PERTY OR LEASE L	NE (FEET)	16. NUMBER OF	F ACRES IN LEAS		17. NUMBER OF ACRES	ASSIGNED TO	
505' (SHL		L (DRILLING, COMP	ETED, OR	19. PROPOSED	DEPTH:	640	20. BOND DESCRIPTION:		40 acres
	R) ON THIS LEAS					5,245	RLB0008031		
	(SHOW WHETH	ER DF, RT, GR, ETC	):	22. APPROXIMA	ATE DATE WORK	,	23. ESTIMATED DURATIO	N:	
5764'	5764' RT-KB 9/1/2006 2						20 days		
24.			PROPOS	ED CASING A	ND CEMEN	TING PROGRAM			
SIZE OF HOLE	<del> </del>	, GRADE, AND WEIG	HT PER FOOT	SETTING DEPTH		CEMENT TYPE, QUA	ANTITY, YIELD, AND SLURR	Y WEIGHT	
20"	14"	line pipe		40	3 yards		Ready Mix		
11"	8-5/8"	J-55	24#	2,000	Premium	Lead	138 sxs	3.50	11.
					Premium	Tail	138 sxs	1.15	15.8
7-7/8"	4-1/2"	N-80	11.6#	5,245	Class G		24 sxs	3.3	11.0
					50/50 Poz	: Class G	598 sxs	1.56	14.3
								<del></del>	
25.				ATTA	CHMENTS				
VERIFY THE FOL	LLOWING ARE A	TTACHED IN ACCOR	DANCE WITH THE U	JTAH OIL AND GAS C	ONSERVATION (	GENERAL RULES:			
WELL PL	AT OR MAP PRE	PARED BY LICENSE	D SURVEYOR OR F	NGINEER	<b> </b>	MPLETE DRILLING PLAN			
		OF WATER RIGHTS					RSON OR COMPANY OTHE	D THAN THE	LEASE OWNER
W EVIDENCE	JE OF BIVISION	OF WATER RIGHTS	AFFROVAL FOR USI	E OF WATER		NW 9, IF OF ERATOR 13 FE	ROON OR COMPANT OTHE	IN THAN THE	LEASE OWNER
NAME (PLEASE	<sub>PRINT)</sub> Alvin	R. (AI) Arlian			TITLE	Landman - Re	gulatory Specialis	st	
SIGNATURE	12 0	Telian,	2		DATE	7/12/2006			
SIGNATURE	<u></u>	- 4	2		DATE				
(This space for Sta	ate use only)						_		

API NUMBER ASSIGNED: 43-047-38395

APPROVAL:

JUL 2 0 2006

#### T10S, R25E, S.L.B.&M. N89'57'W - 39.92 (G.L.O.) 1975 2635.71' (Measured) Brass Cap $N89^{58}W - 39.96$ (G.L.O.) N89°57'W G.L.O. (Basis of Bearings) S89°59'58"W - 2635.85' (Meas.) 1975 Brass Cap Brass Cap (C.L.O.) 659' 40.40 2667. Drilling Window N00.04'E N00.06'E 3,,90,50 NO0.04.07"E 505' 1975 Brass Cap Brass Cap WELL LOCATION: (C.L.O.) SOUTHAM CANYON 10-25-11-32 ELEV. UNGRADED GROUND = 5758.2' 84 39. N00'16'E 00'15'28" N0075 1975 1975 1975 Brass Cap Brass Cap Brass Cap S89°59'18"E - 2649.30' (Meas.) N89°55'53"E - 2636.63' (Meas.) S89\*57'E - 40.13 (G.L.O.) N89\*59'E - 39.97 (G.L.O.) SOUTHAM CANYON 10-25-11-32 = SECTION CORNERS LOCATED (Surface Location) NAD 83 LATITUDE = 39.54'26.31"BASIS OF ELEV; U.S.G.S. 7-1/2 min LONGITUDE = 109° 07' 57.16" QUAD (SOUTHAM CANYON)

## ENDURING RESOURCES

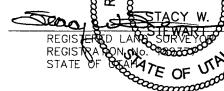
WELL LOCATION, TOP OF HOLE FOR THE SOUTHAM CANYON 10-25-11-32, THE TOP OF HOLE LOCATED AS SHOWN IN THE SW 1/4 NW 1/4, THE BOTTOM HOLE LOCATED AS SHOWN IN THE NW 1/4 NW 1/4 OF SECTION 32, T10S, R25E, S.L.B.&M. UINTAH COUNTY, UTAH.



#### NOTES:

1. The Bottom of hole bears N06'48'24"E 1316.80' from the Top of Hole.

THIS IS TO CERTIFY THAT THE ABOVE PERT WAS PREPARED FROM FIELD NOTES OF ACTUR, SURVEYS MADE BY ME OR UNDER MY SUPPRESIDENT THAT THE SAME ARE TRUE AND FORRECT TO THE BEST OF MY KNOWLEDGE AND FELIEF.No.189377



## TRI STATE LAND SURVEYING & CONSULTING

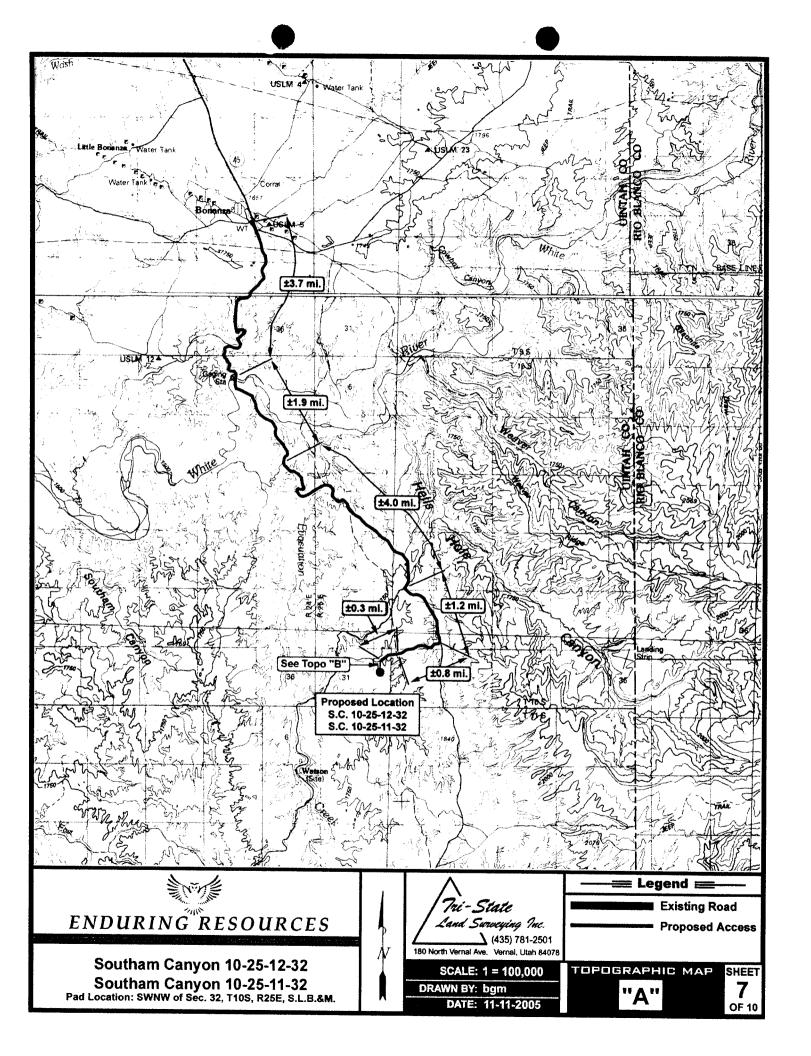
180 NORTH VERNAL AVE. - VERNAL, UTAH 84078 (435) 781-2501

SHEET

2b

OF 10

DATE DRAWN: 10-28-05	SURVEYED BY: J.H.				
REVISED:	DRAWN BY: F.T.M.				
NOTES:	SCALE: 1" = 1000'				



From:

Robert Clark

To:

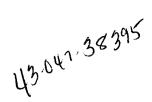
Whitney, Diana

Date:

8/14/2006 10:34:14 AM

Subject:

RDCC short turn around responses



The following comments are provided in response to short turn around items RDCC #6916 through RDCC #6921, and RDCC #6943.

RDCC #6916, Comments begin: The proposal of Enduring Resources, LLC to drill the Southam Canyon 10-25-34-32 wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City. Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6917, Comments begin: The proposal of Enduring Resources. LLC to drill the Southam Canyon 10-25-14-32 wildcat well. in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at

www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6918, Comments begin: The proposal of Enduring Resources, LLC to drill the Southam Canyon 10-25-11-32 wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <a href="http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf">http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf</a>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at

www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6919, Comments begin: The proposal of the Houston Exploration Company to drill the North Horseshoe 5-16-6-22 wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for

preparing an NOI are available on-line at <a href="http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf">http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf</a>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at

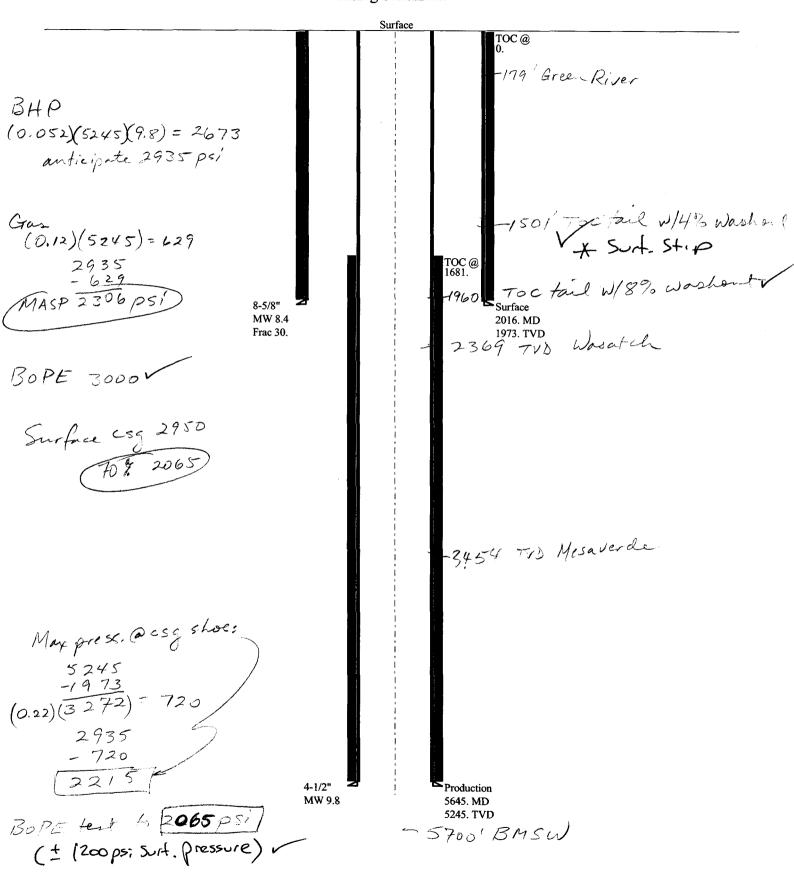
www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6920, Comments begin: The proposal of Petro-Hunt, LLC to drill the Vonda H. Christensen Family LP 35A-3-1 wildcat well, in Sanpete County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <a href="http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf">http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf</a>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at

www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6921, Comments begin: The proposal of Petro-Hunt, LLC to drill the Lamb Trust 31B-1-1 wildcat well, in Sanpete County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust. such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6943, Comments begin: The proposal of Enduring Resources, LLC to drill the Long Draw 12-24-31-26 wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at

http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. Robert ClarkDivision of Air Quality536-4435

CC: Mcneill, Dave; Wright, Carolyn

# 8-06 Enduring Southam Cyn 9-25-11-32 Casing Schematic



A dequate Dup 9/20/06

Well name:

08-06 Enduring Southam Cyn 10-25-11-32

Operator:

**Enduring Resources, LLC (N2750)** 

String type:

Surface

Project ID:

Location:

**Uintah County** 

43-047-38395

Design parameters:

Collapse

Mud weight:

8.400 ppg

Design is based on evacuated pipe.

Minimum design factors:

Collapse: Design factor

1.125

**Environment:** H2S considered?

Surface temperature: 75 °F Bottom hole temperature: 103 °F

Temperature gradient: 1.40 °F/100ft Minimum section length: 1,500 ft

Burst:

Design factor

1.00

1.80 (J)

1.80 (J)

1.60 (J)

1.50 (J)

Cement top:

Surface

No

**Burst** 

Max anticipated surface

pressure: Internal gradient: Calculated BHP

2,041 psi 0.120 psi/ft

2,277 psi

No backup mud specified.

**Tension:** 

8 Round STC: 8 Round LTC: **Buttress:** 

Premium: Body yield:

1.50 (B)

Tension is based on buoyed weight. Neutral point: 1,743 ft

Directional well information: Kick-off point 400 ft Departure at shoe: 324 ft Maximum dogleg: 5 °/100ft

Inclination at shoe: 30.8°

Re subsequent strings:

Next setting depth: 5.245 ft Next mud weight: 9.800 ppg Next setting BHP:

Fracture mud wt: Fracture depth: Injection pressure

2,670 psi 30.000 ppg 1,973 ft 3,075 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2016	8.625	24.00	J-55	ST&C	1973	2016	7.972	97.1
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	861	1290	1.499	2277	2950	1.30	41	(Rips) 244	5.90 J

Prepared

by:

Helen Sadik-Macdonald Utah Div. of Oil & Mining

Phone: 801-538-5357 FAX: 801-359-3940

Date: August 29,2006 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 1973 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a





Well name:

08-06 Enduring Southam Cyn 10-25-11-32

Operator:

**Enduring Resources, LLC (N2750)** 

String type:

Production

Project ID:

43-047-38395

Location:

**Uintah County** 

Minimum design factors: **Environment:** 

Design parameters:

Collapse

Mud weight:

9.800 ppg

Design is based on evacuated pipe.

Collapse:

Design factor

1.125

H2S considered?

No Surface temperature: 75 °F

Bottom hole temperature: 148 °F Temperature gradient: 1.40 °F/100ft

Minimum section length: 1,500 ft

**Burst:** 

Design factor

1.00

1.80 (J)

1.80 (J)

Cement top:

1,681 ft

Burst

Max anticipated surface

pressure: Internal gradient:

2,041 psi 0.120 psi/ft

Calculated BHP 2,670 psi

No backup mud specified.

**Tension:** 

8 Round STC: 8 Round LTC:

1.60 (J) **Buttress:** Premium: 1.50 (J)

Body yield:

1.50 (B)

Directional well information:

Kick-off point 400 ft Departure at shoe: 1317 ft Maximum dogleg: 5 °/100ft

Inclination at shoe: 0 °

Tension is based on buoyed weight. Neutral point: 4.877 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	5645	4.5	11.60	N-80	LT&C	5245	5645	3.875	130.9
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	2670 <sup>°</sup>	6350	2.378	2670	7780	2.91		223	4.29 J

Prepared

Helen Sadik-Macdonald Utah Div. of Oil & Mining Phone: 801-538-5357 FAX: 801-359-3940

Date: August 30,2006 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 5245 ft, a mud weight of 9.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

**MEMORANDUM** 

DATE:

August 15, 2006

TO:

Utah Division of Oil, Gas and Mining, Forestry, Fire, and State

Lands, and Resource Development Coordinating Committee

FROM:

Utah Geological Survey, Ground Water and Paleontology Program

Endu 12 38 395

SUBJECT:

UGS comments on RDCC items 6916, 6917, 6918, 6919, 6920,

6921, 6922, and 6943.

6916. Division of Oil, Gas and Mining # ML-47065

Short Turn Around; Sec. 32, T10S, R25E

Uintah Co.

Application for Permit to Drill - proposal to drill a wildcat well the Southam Canyon 10-25-34-32 on a State lease ML-47065

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

6917. Division of Oil, Gas and Mining Short Turn Around; Sec. 32, T10S, R25E

Uintah Co.

Application for Permit to Drill - proposal to drill a wildcat well the Southam Canyon 10-25-14-32 on a State lease ML-47065

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

6918. Division of Oil, Gas and Mining Short Turn Around; Sec. 32, T10S, R25E

Uintah Co.

Application for Permit to Drill - proposal to drill the Southam Canyon 10-25-11-32 on a State lease ML-47065

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

6919. Division of Oil, Gas and Mining Short Turn Around; Sec. 16, T6S, R22E Uintah Co.

Application for Permit to Drill - proposal to drill a wildcat well the North Horseshoe 5-16-6-22 on a State lease ML-47969

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

6920. Division of Oil, Gas and Mining Short Turn Around; Sec. 35, T16S, R2E Sanpete Co.

Application for Permit to Drill - proposal to drill a wildcat well the Vonda H. Christ. Fam. 35A-3-1 on a Fee lease

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

6921. Division of Oil, Gas and Mining Short Turn Around; Sec. 31, T15S, R3E Sanpete Co.

Application for Permit to Drill - proposal to drill a wildcat well the Lamb Trust 31B-1-1 on a Fee lease Fee

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its

easements..

6922. Trust Lands Administration Other Proposed Actions; State Land Proposals Sec. 16, T10S, R18E; Uintah Co; Easement #1124

Two paleontological localities with vertebrate fossils, Utah Paleontological Localities Un 1699 and Un 1700, are recorded in our files in this project area. The project is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements and, if these known critical fossil localities are to be impacted, they should be mitigated by a permitted paleontologist.

6943. Division of Forestry, Fire and State Lands Short Turn Around; Drilling Permits; Sec. 26, T12S, R24E Uintah Co.

Application for Permit to Drill - proposal to drill a wildcat well the Long Draw 12-24-31-26 on a State lease ML-47090

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

From:

Carolyn Wright Whitney, Diana

To: Date:

8/17/2006 10:34:36 AM

Subject:

Fwd: comments

FYI

>>> Shelly Quick 08/15/06 12:47 PM >>> Project Number: 6918, 6917 and 6916 Sponsor: Division of Oil, Gas and Mining

SLB&M: Sec. 32, T10S, R25E Counties Affected: Uintah

Description: Application for Permit to Drill - proposal to drill the Southam Canyon 10-25-11-32 on a State

Cerdusing 38495

lease ML-47065

Comments Due to Sponsor 08/22/2006

#### Comments:

Well must be sited, drilled, and managed to prevent degradation of water quality through measures to limit erosion, limit stormwater runoff, and limit pollutant loading to runoff. 1- Wellpad placement or expansion disturbs soils. Vegetative and/or structural measures to control erosion should be implemented within 60 days of initial soil disturbance to prevent erosion leaving the site from exceeding the tolerable rate as determined by the local office of USDA/NRCS. Such erosion control shall be maintained for the duration of the lease and shall remain in functional operation when the lease or permit is terminated.2- If vegetation surrounding the wellpad does not provide at least 60% ground cover within 60 days of creating the wellpad, engineering practices should be implemented within those 60 days to control erosion. Such engineering measures may include mulching, use of fiber mats, cross slope trenching, contour furrows. rock dams, terracing or such other erosion control practices as are required to prevent erosion from exceeding the tolerable rate. 3- No disturbance or degradation to or of surrounding or nearby soils, native or beneficial vegetation, or riparian areas should be permitted outside of the area defined in the permit. 4-No spills nor runoff of chemicals including hydrocarbons, lubricants, salt water, antifreeze, or other potentially damaging materials should be permitted.5- Before wellpad use is discontinued, permit holder shall restore the site to prevent stormwater runoff from exceeding water quality standards. Erosion from the site shall not exceed the tolerable rate as established by the local office of USDA / NRCS either while the wellpad site is in use, or when it is no longer in active use. No petrochemicals, salt, pesticides, nor other introduced potential pollutants shall be left such that they might be eroded, dissolved, blown, or otherwise carried away to become potential pollutant loads. 6- Employing structural BMPS for access roadways to capture sediment in runoff before it would enter intermittent or perennial streams, washes, or aullies.

From: To: Carolyn Wright Whitney, Diana

Date:

8/21/2006 9:19:50 AM

Subject:

Fwd: RDCC short turn around responses

FYI

>>> Robert Clark 8/14/2006 10:33 AM >>>

The following comments are provided in response to short turn around items RDCC #6916 through RDCC #6921, and RDCC #6943.

RDCC #6916, Comments begin: The proposal of Enduring Resources, LLC to drill the Southam Canyon 10-25-34-32 wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6917, Comments begin: The proposal of Enduring Resources, LLC to drill the Southam Canyon 10-25-14-32 wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <a href="http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf">http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf</a>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at

www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6918, Comments begin: The proposal of Enduring Resources, LLC to drill the Southam Canyon 10-25-11-32 wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <a href="http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf">http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf</a>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at

www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6919, Comments begin: The proposal of the Houston Exploration Company to drill the North Horseshoe 5-16-6-22 wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a

permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <a href="http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf">http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf</a>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at

www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6920, Comments begin: The proposal of Petro-Hunt, LLC to drill the Vonda H. Christensen Family LP 35A-3-1 wildcat well, in Sanpete County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <a href="http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf">http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf</a>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at

www.rules.utah.gov/publicat/code/r307/r307.htm . Comments end. RDCC #6921, Comments begin: The proposal of Petro-Hunt, LLC to drill the Lamb Trust 31B-1-1 wildcat well, in Sanpete County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust. such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at <a href="www.rules.utah.gov/publicat/code/r307/r307.htm">www.rules.utah.gov/publicat/code/r307/r307.htm</a>. Comments end. RDCC #6943, Comments begin: The proposal of Enduring Resources, LLC to drill the Long Draw 12-24-31-26 wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf. The proposed project is also subject to

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From:

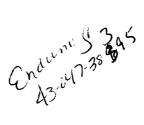
Carolyn Wright Whitney, Diana

To: Date:

8/21/2006 9:20:40 AM

Subject:

Fwd: comments



>>> Shelly Quick 8/15/2006 12:47 PM >>> Project Number: 6918, 6917 and 6916 Sponsor: Division of Oil, Gas and Mining

SLB&M: Sec. 32, T10S, R25E Counties Affected: Uintah

Description: Application for Permit to Drill - proposal to drill the Southam Canyon 10-25-11-32 on a State

lease ML-47065

Comments Due to Sponsor 08/22/2006

#### Comments:

Well must be sited, drilled, and managed to prevent degradation of water quality through measures to limit erosion, limit stormwater runoff, and limit pollutant loading to runoff. 1- Wellpad placement or expansion disturbs soils. Vegetative and/or structural measures to control erosion should be implemented within 60 days of initial soil disturbance to prevent erosion leaving the site from exceeding the tolerable rate as determined by the local office of USDA/NRCS. Such erosion control shall be maintained for the duration of the lease and shall remain in functional operation when the lease or permit is terminated.2- If vegetation surrounding the wellpad does not provide at least 60% ground cover within 60 days of creating the wellpad, engineering practices should be implemented within those 60 days to control erosion. Such engineering measures may include mulching, use of fiber mats, cross slope trenching, contour furrows, rock dams, terracing or such other erosion control practices as are required to prevent erosion from exceeding the tolerable rate. 3- No disturbance or degradation to or of surrounding or nearby soils, native or beneficial vegetation, or riparian areas should be permitted outside of the area defined in the permit. 4-No spills nor runoff of chemicals including hydrocarbons, lubricants, salt water, antifreeze, or other potentially damaging materials should be permitted.5- Before wellpad use is discontinued, permit holder shall restore the site to prevent stormwater runoff from exceeding water quality standards. Erosion from the site shall not exceed the tolerable rate as established by the local office of USDA / NRCS either while the wellpad site is in use, or when it is no longer in active use. No petrochemicals, salt, pesticides, nor other introduced potential pollutants shall be left such that they might be eroded, dissolved, blown, or otherwise carried away to become potential pollutant loads. 6- Employing structural BMPS for access roadways to capture sediment in runoff before it would enter intermittent or perennial streams, washes, or gullies.

475 17<sup>th</sup> Street, Suite 1500 Denver, CO 80202 (303) 573-1222 (303) 573-0461

# **Enduring Resources**



	ease Reply	□ Pleas	e Recycle	· 	
	gent 	X For Re			☐ Please Comment
Re:	Southam Canyon 1	0-25-11-32	CC:		
Phone		•	Date:	8/30/2006	
Fax:	801-359-3940		Pagesi	7	
To:	Helen Sadik-Macdo	nald	From:	Evette Biss	sett

Corrected cover page and drilling plan

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AUG 3 0 2006

DIV. OF OIL, GAS & MINING

# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

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5764'	RT-KB	ER UP, RI, GR, ETC.)	E .	22. APPROXIM 9/1/2006	ATE DATE WORK	WILL START:	,	TIMATED DURATION:		
	TOTAL	<del></del>		9/1/2000			20	days		
24.			PROPO	SED CASING A	ND CEMEN	TING PROGRAM				
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				य र्ट्या है।	Premium 7	Tail	13	8 sxs 1	.15	15.8
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NAME (PLEASE P.	RINT) Alvin F	R. (Al) Arlian			TITLE	Landman - Reg	ulato	ry Specialist		
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API NUMBER ASSI	GNED:			<del></del>	APPROVAL:					

(11/2001)

(See instructions on Reverse Side

RECEIVED AUG 3 0 2006 Enduring Resources, LLC Southam Canyon 10-25-11-32 NW-NW 32-10S-25E Uintah County, Utah State Lease: ML-47065

## **ONSHORE ORDER 1 - DRILLING PLAN**

## 1. <u>Estimated Tops of Geological Markers:</u>

Formation	Depth (K.B.)
Uinta	Surface
Green River	47.9
Wasatch	2369
Mesaverde	3454

## 2. Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals:

Substance	Formation	Depth (K.B.)
	KB-Uinta Elevation: 57/6/4	
Oil / Gas	Green River	1749
Oil /Gas	Wasatch	2369
Oil /Gas	Mesaverde	3454
	Estimated TD	5645

A 11" hole will be drilled to approximately 2000 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set.

## 3. Pressure Control Equipment: (3000 psi schematic attached)

- A. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer on 3,000 psi casinghead, with 3,000 psi choke manifold equipped per the attached diagram. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.
- B. Pressure Rating: 3,000 psi BOPE
- C. Kelly will be equipped with upper and lower Kelly valves.
- D. Testing Procedure: Annular Preventer

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

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<u> Page - 2</u>

At a minimum, the above pressure test will be performed:

- 1. When the annular preventer is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

## **Blow-Out Preventer**

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

- 1. When the BOP is initially installed;
- 2. Whenever any seal subject to test pressure is broken;
- 3. Following related repairs; and
- 4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

## E. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

## 4. <u>Proposed Casing & Cementing Program:</u>

## A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (MD)
20"	14" O.D.				40' (GL)
11"	8-5/8"	24#	J-55	ST&C	0 – 2,016' (KB) est.
7-7/8"	4-1/2"	11.6#	N-80	LT&C	0 - 5645 (KB)

The surface casing will have guide shoe, 1 joint, insert float collar. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and the next16 joints with bowspring centralizers on every other collar (8 centralizers total). Thread lock guide shoe.

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Page - 3

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

## B. Casing Design Parameters:

ſ					
	Depth (MD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
L	40' (GL)	14" OD			Tonsion(mibs)/31
		8-5/8", 24#/ft, J55, STC	1370/1.52(a)	2950/3.28(b)	244/5.81(c)
L	5645 (KB)	4-1/2", 11.6#/ft, N-80, LTC	6350/2 17 (d)	7780/2.88 (e)	223/3.96(f)

- (a.) based on full evacuation of pipe with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient
- (f.) based on casing string weight in 9.2 ppg mud

## PROPOSED CEMENTING PROGRAM

# Surface Casing (if well will circulate)-Cemented to surface

CASING 8-5/8"	SLURRY Lead	FT. of FILL 1516	CEMENT TYPE Premium cement + 16% gel + 0.25 pps celloflake	SXS 138	EXCESS (%) 25%	WEIGHT (ppg) 11.1	YIELD (ft³/sx) 3.50
8-5/8*	Tail	500	Premium cement + 2% CaC <sub>2</sub> + 0.25 pps celloflake	138	25%	15.8	1.15

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft<sup>3</sup>/sx) cement will be premium cement w/ 3% CaCl<sub>2</sub>.+0.25 pps celloflake. Volume as required

# Surface Casing (if well will not circulate) - Cemented to surface

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft³/sx)
8-5/8"	Lead	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25	15.8	1.15
8-5/8"	Top job	As req.	Premium cement + 3% CaCl <sub>2</sub> + 0.25 pps celloflake	As Req.		15.8	1.15

AUG 3 0 2006

Page

## Production Casing and Liner - Cemented TD to 300' above base of surface casing

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft³/sx)
4-1/2"	Lead	253	Class "G" + 5% NaCl + 12% Gel + 0.25 pps celloflake + 0.2% antifoam + 0.25% fluid loss + 1% extender	24	25	11.0	3.3
4-1/2"	Tail	3676	50/50 POZ Class G + 2% gel +1% CaCl <sub>2</sub> + 0.2% dispersant + 0.2% fluid loss + 0.1% antifoam	<b>67</b> /1	25	14.3	1.56

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to 300' above base of surface casing. Čement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

#### 5. **Drilling Fluids (mud) Program:**

Interval (MD)	Mud Weight	Fluid Loss	Viscosity	Mud Type
0' - 2016' (KB)		No cntrl		Air/mist
2000'-3000' (KB)	8.4-8.6	No cntri	28-36	Water
3000'-5645#(KB)	8.8-9.8	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

#### 6. **Evaluation Program:**

Tests:

No tests are currently planned.

Coring:

No cores are currently planned.

Samples:

No sampling is currently planned.

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Page - 5 -

## Logging

 Dual Induction – SFL /Gamma Ray/Caliper/SP/TDLT/CNL/ML TD to Base Surface Casing

Cement Bond Log / Gamma Ray:
 TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

<u>Stimulation</u>: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

## 7. Abnormal Conditions:

No abnormal temperatures or pressures are anticipated. No  $H_2S$  has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 2935 psi (calculated at 0.52psi/foot of hole) and maximum anticipated surface pressure equals approximately 1694 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

## 8. Anticipated Starting Dates:

Anticipated Commencement Date-

Within one year of APD issue.

Drilling Days-

Approximately 10 days

Completion Days

Approximately 10 days

• Anticipate location construction within 30 days of permit issue.

## 9. <u>Variances:</u>

None anticipated

## 10. Other:

A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining and the School and Institutional Trust lands Administration upon their receipt.

Single Shot directional surveys will be dropped every 2000 feet to monitor hole angle.

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From:

Ed Bonner

To:

Whitney, Diana

Date:

9/12/2006 2:43:10 PM

Subject:

Well Clearance

The following wells have been given cultural resource clearance by the Trust Lands Cultural Resources Group:

#### Cochrane Resources, Inc.

Divide 32-32 (API 43 019 31487)

#### Enduring Resources, LLC

Southam Canyon 10-25-11-32 (API 43 047 38395)

Southam Canyon 10-25-14-32 (API 43 047 38396)

Southam Canyon 10-25-34-32 (API 43 047 38401)

Rock House 10-23-34-32 (API 43 047 38470)

East Bench 11-22-31-32 (API 43 047 38273)

Sand Wash 12-22-23-32 (API 43 047 38285)

Sand Wash 12-22-44-32 (API 43 047 38286)

Buck Camp 12-22-23-2 (API 43 047 38483)

Buck Camp 12-22-14-2 (API 43 047 38482)

#### The Houston Exploration Company

North Horseshoe 5-16-6-22 (API 43 047 38406)

#### **Newfield Production Company**

Horseshoe Bend State 4-28-6-21 (API 43 047 38366)

#### XTO Energy, Inc.

State of Utah 17-8-19-11D (API 43 015 30695)

State of Utah 17-8-20-13 (API 43 015 30698)

If you have any questions regarding this matter please give me a call.

CC:

Davis, Jim; Garrison, LaVonne; Hill, Brad; Hunt, Gil



State of Utah

Department of Natural Resources

> MICHAEL R. STYLER Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR. Governor

GARY R. HERBERT Lieutenant Governor

September 21, 2006

Enduring Resources, LLC 475 17th St., Ste. 1500 Denver, CO 80202

Re:

Southam Canyon 10-25-11-32 Well, 1974' FNL, 505' FWL, SW NW, Sec. 32, T. 10 South, R. 25 East, Bottom Location 666' FNL, 659' FWL, NW NW, Sec. 32, T. 10 South, R. 25 East, Uintah County, Utah

#### Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-38395.

Sincerely,

Gil Hunt

**Associate Director** 

pab

**Enclosures** 

cc:

**Uintah County Assessor** 

**SITLA** 

Operator:		Enduring Resources, LLC			
Well Name & Numl	oer	Southam Canyon 10-25-11-32 43-047-38395 ML-47065			
API Number:					
Location: Bottom Location:	SW NW NW NW	Sec. 32 Sec. 32	T. <u>10 South</u> T. 10 South	<b>R.</b> <u>25 East</u> <b>R.</b> 25 East	

## **Conditions of Approval**

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

### 2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

## 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.
- 5. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.
- 6. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

Page 2 43-047-38395 September 21, 2006

- 7. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.
- 8. Surface casing shall be cemented to the surface.
- 9. Operator shall comply with applicable recommendations resulting from Resource Development Coordinating Committee review. Statements attached.

#### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

# CONFIDENTIAL

5. LEASE DESIGNATION AND SERIAL NUMBER:

FORM 9

		ML-4/065
SUNDR	Y NOTICES AND REPORTS ON WELLS.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill	new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to	7. UNIT or CA AGREEMENT NAME:
drill horizontal	aterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	n/a
1. TYPE OF WELL OIL WELL	GAS WELL OTHER	8. WELL NAME and NUMBER: Southam Canyon 10-25-11-32
2. NAME OF OPERATOR:		9. API NUMBER:
Enduring Resources, LLC		4304738395
3. ADDRESS OF OPERATOR:	PHONE NUMBER:	10. FIELD AND POOL, OR WILDCAT:
	Y Denver STATE CO ZIP 80202 (303) 350-5719	Undesignated
4. LOCATION OF WELL		
FOOTAGES AT SURFACE: 1974'	FNL - 505' FWL	соимту: <b>Uintah</b>
	OMBIN 00 400 055 C	OTATE
QTR/QTR, SECTION, TOWNSHIP, RAI	NGE, MERIDIAN: SWNW 32 10S 25E S	STATE: UTAH
11. CHECK APP	ROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPO	RT. OR OTHER DATA
	TYPE OF ACTION	
TYPE OF SUBMISSION	ACIDIZE DEEPEN	REPERFORATE CURRENT FORMATION
✓ NOTICE OF INTENT		
(Submit in Duplicate)	ALTER CASING FRACTURE TREAT	SIDETRACK TO REPAIR WELL
Approximate date work will start:	CASING REPAIR NEW CONSTRUCTION	TEMPORARILY ABANDON
	CHANGE TO PREVIOUS PLANS OPERATOR CHANGE	TUBING REPAIR
	CHANGE TUBING PLUG AND ABANDON	VENT OR FLARE
SUBSEQUENT REPORT	CHANGE WELL NAME PLUG BACK	WATER DISPOSAL
(Submit Original Form Only)		WATER SHUT-OFF
Date of work completion:	CHANGE WELL STATUS PRODUCTION (START/RESUME)	<u> </u>
	COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE	✓ OTHER: Request for APD
	CONVERT WELL TYPE RECOMPLETE - DIFFERENT FORMATION	Extension
12. DESCRIBE PROPOSED OR C	OMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volum	es. etc.
in Bedonibe into obeb on a	om Elizo of Littliono. Gloan, offer an polarion country and a series of the series of	,
		•
Enduring Becourses	LLC respectfully request an extension to the expiration date of this	Application for Permit to Drill
Enduring Resources,	LLC respectibility request an extension to the expiration date of this	Application for Fermit to Din
FROM: 9/21/	2007	
TO: 9/21/	200	
10. 9/21/	Approved by the	
	LIFON LINVISION OF	
	Oil, Gas and Mining	
	Oll, Gas and W	
	F0-D- 07	
	Date: Oa (a)	<b>-</b>
		COPY SEMILO OPERATOR
	By: Asset San	Marie Section
	W	KIN
		N. P. W. Street, C.
NAME (PLEASE PRINT) Alvin R. (A		
NAME (PLEASE PRINT)	Al) Arlian Landman - Requ	latory Specialist
, , , , , , , , , , , , , , , , , , ,	AI) Arlian TITLE Landman - Regu	latory Specialist
	0/49/2007	latory Specialist
SIGNATURE		latory Specialist

(This space for State use only)

RECEIVED SEP 1 9 2007

## Application for Permit to Drill Request for Permit Extension Validation

Validation
(this form should accompany the Sundry Notice requesting permit extension)

API:

4304738395

Well Name: Southam Canyon 10-25-11-32 Location: 1974' FNL - 505' FWL, SWNW, Sec 32, T10S-R25E Company Permit Issued to: Enduring Resources, LLC Date Original Permit Issued: 9/21/2006
The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.
Following is a checklist of some items related to the application, which should be verified.
If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes $\square$ No $\square$
Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes□No☑
Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes□No☑
Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes□ No ☑
Has the approved source of water for drilling changed? Yes□No☑
Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes□No☑
Is bonding still in place, which covers this proposed well? Yes☑No□
9/18/2007
Signature Date
Title: Landman - Regulatory Specialist
Representing: Enduring Resources, LLC

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SEP 1 9 2007

#### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL, GAS AND MININGINFILLENTIAL	5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47065
SUNDRY NOTICES AND REPORTS ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL GAS WELL OTHER	8. WELL NAME and NUMBER: Southam Canyon 10-25-11-32
2. NAME OF OPERATOR: Enduring Resources, LLC	9. API NUMBER: 4304738395
3. ADDRESS OF OPERATOR: PHONE NUMBER:	10. FIELD AND POOL, OR WILDCAT:
475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202 (303) 350-5114	Undesignated
FOOTAGES AT SURFACE: 1974' FNL - 505' FWL	соилту: Uintah
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 32 10S 25E S	STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPO	DRT, OR OTHER DATA
TYPE OF SUBMISSION TYPE OF ACTION	
✓ NOTICE OF INTENT (Submit in Duplicate)	REPERFORATE CURRENT FORMATION SIDETRACK TO REPAIR WELL
Approximate date work will start: CASING REPAIR NEW CONSTRUCTION	TEMPORARILY ABANDON
CHANGE TO PREVIOUS PLANS OPERATOR CHANGE	TUBING REPAIR
CHANGE TUBING PLUG AND ABANDON	VENT OR FLARE
SUBSEQUENT REPORT CHANGE WELL NAME PLUG BACK	WATER DISPOSAL
(Submit Original Form Only)  CHANGE WELL STATUS  PRODUCTION (START/RESUME)	WATER SHUT-OFF
Date of work completion:  COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE	✓ отнек: Request for APD
CONVERT WELL TYPE RECOMPLETE - DIFFERENT FORMATION	Extension
Enduring Resources, LLC respectfully request an extension to the expiration date of this FROM: 9/19/2008 TO: 9/19/2009  Approved by the Utah Division of Oil, Gas and Mining  Date:  By:	
NAME (PLEASE PRINT) Alvin R. (AI) Arlian  TITLE Landman - Regulation   DATE 9/5/2008	llatory Specialist
(This space for State use only)  COPY SENT TO OPERATOR  Date: 4.23.2008	RECEIVED

(See Instructions on Reverse Side)

DIV. OF OIL, GAS & MINING

SEP 18 2008

Initials:



API: 4304738395  Well Name: Southam Canyon 10-25-11-32  Location: 1974' FNL - 505' FWL, SWNW, Sec 32, T10S-  Company Permit Issued to: Enduring Resources, LLC  Date Original Permit Issued: 9/21/2006	
The undersigned as owner with legal rights to drill on above, hereby verifies that the information as submit approved application to drill, remains valid and does	ted in the previously
Following is a checklist of some items related to the a verified.	application, which should be
If located on private land, has the ownership changed agreement been updated? Yes□No□	d, if so, has the surface
Have any wells been drilled in the vicinity of the properthe spacing or siting requirements for this location? Y	
Has there been any unit or other agreements put in permitting or operation of this proposed well? Yes□!	
Have there been any changes to the access route incof-way, which could affect the proposed location? Ye	
Has the approved source of water for drilling change	d? Yes□No☑
Have there been any physical changes to the surface which will require a change in plans from what was d evaluation? Yes□No☑	
Is bonding still in place, which covers this proposed v	vell? Yes⊠No□
<u>Kalubonett</u> Signature	9/5/2008 Date
Title: Administrative Assistant	
Representing: Enduring Resources, LLC	_
	DECEIVED

SEP 18 2008



Lieutenant Governor

# DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA Division Director

October 19, 2009

Enduring Resources, LLC 475 17<sup>TH</sup> Street Ste 1500 Denver, CO 80202

Re: APD Rescinded – Southam Canyon 10-25-11-32, Sec. 32, T.10S, R. 25E

Uintah County, Utah API No. 43-047-38395

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on September 21, 2006. On September 19, 2007 and September 23, 2008 the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective October 19, 2009.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason

**Environmental Scientist** 

cc:

Well File

SITLA, Ed Bonner

